



OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
2 CASE EXCAVATOR

Component
Diesel Engine

Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend you service the filters on this component. Resample at the next service interval to monitor.

▲ Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of particulates present in the oil. There is an abnormal amount of solids and carbon present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0584600	---	---
Sample Date	Client Info		20 Sep 2023	---	---
Machine Age	mls	Client Info	0	---	---
Oil Age	mls	Client Info	0	---	---
Oil Changed	Client Info		N/A	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	88	---	---
Chromium	ppm	ASTM D5185m >20	3	---	---
Nickel	ppm	ASTM D5185m >4	2	---	---
Titanium	ppm	ASTM D5185m	<1	---	---
Silver	ppm	ASTM D5185m >3	0	---	---
Aluminum	ppm	ASTM D5185m >20	▲ 6	---	---
Lead	ppm	ASTM D5185m >40	20	---	---
Copper	ppm	ASTM D5185m >330	30	---	---
Tin	ppm	ASTM D5185m >15	12	---	---
Vanadium	ppm	ASTM D5185m	0	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	307	---	---
Barium	ppm	ASTM D5185m	2	---	---
Molybdenum	ppm	ASTM D5185m	85	---	---
Manganese	ppm	ASTM D5185m	8	---	---
Magnesium	ppm	ASTM D5185m	354	---	---
Calcium	ppm	ASTM D5185m	1452	---	---
Phosphorus	ppm	ASTM D5185m	983	---	---
Zinc	ppm	ASTM D5185m	1262	---	---
Sulfur	ppm	ASTM D5185m	3180	---	---

CONTAMINANTS

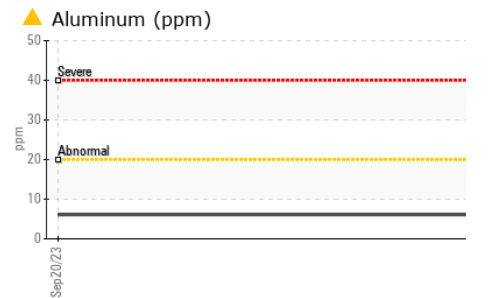
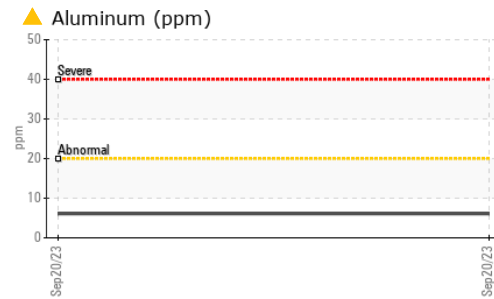
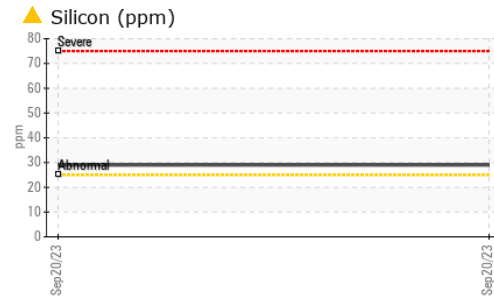
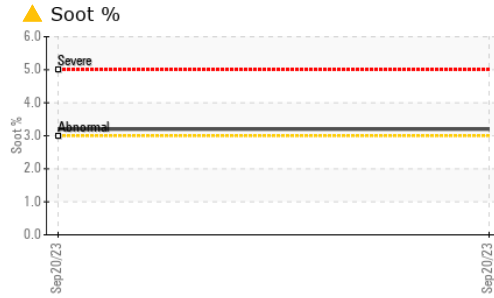
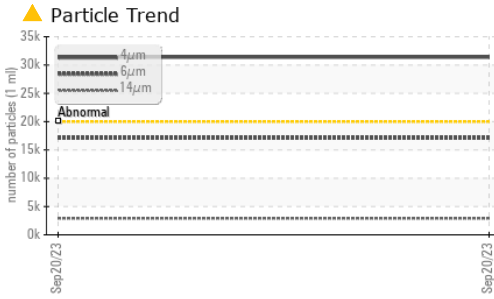
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 29	---	---
Sodium	ppm	ASTM D5185m	6	---	---
Potassium	ppm	ASTM D5185m >20	4	---	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	▲ 3.2	---	---
Nitration	Abs/cm	*ASTM D7624 >20	11.4	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	29.2	---	---



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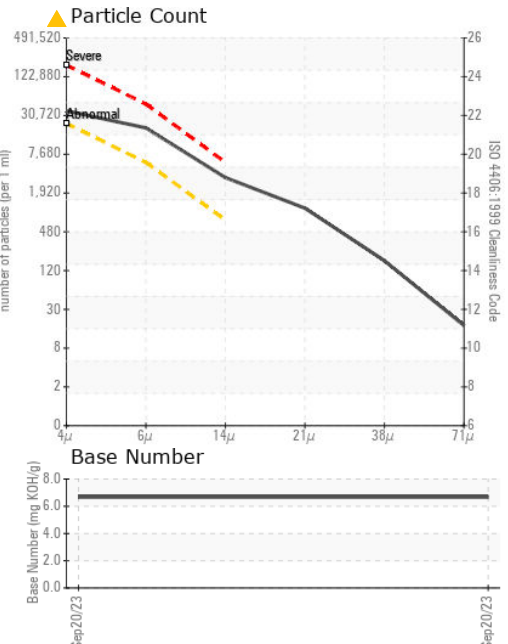
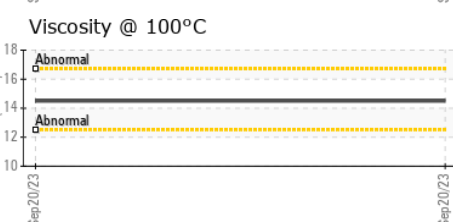
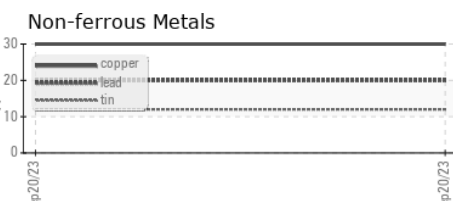
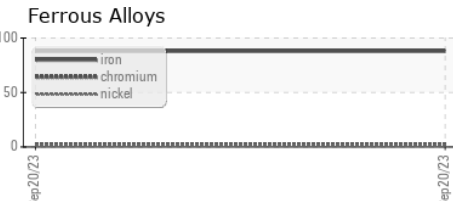
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 31388	---	---
Particles >6µm	ASTM D7647	>5000	▲ 17099	---	---
Particles >14µm	ASTM D7647	>640	▲ 2910	---	---
Particles >21µm	ASTM D7647	>160	▲ 980	---	---
Particles >38µm	ASTM D7647	>40	▲ 151	---	---
Particles >71µm	ASTM D7647	>10	▲ 15	---	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 22/21/19	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414	>25	21.6	---	---
Base Number (BN)	mg KOH/g ASTM D2896		6.68	---	---

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar *Visual	NONE	NONE	---	---
Yellow Metal	scalar *Visual	NONE	NONE	---	---
Precipitate	scalar *Visual	NONE	NONE	---	---
Silt	scalar *Visual	NONE	NONE	---	---
Debris	scalar *Visual	NONE	NONE	---	---
Sand/Dirt	scalar *Visual	NONE	NONE	---	---
Appearance	scalar *Visual	NORML	NORML	---	---
Odor	scalar *Visual	NORML	NORML	---	---
Emulsified Water	scalar *Visual	>0.2	NEG	---	---
Free Water	scalar *Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D445		14.5	---	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0584600 **Received** : 25 Sep 2023
Lab Number : 05960772 **Diagnosed** : 27 Sep 2023
Unique Number : 10661985 **Diagnostician** : Don Baldrige
Test Package : MOB 2 (Additional Tests: PrtCount)

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Certificate L2367
 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)