



# OIL ANALYSIS REPORT

WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>SEVERE</b>

Machine Id  
**JCB 3CX BACKHOE 2871016**  
Component  
**Diesel Engine**  
Fluid  
**JCB 15W40 (14 QTS)**

## RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JCB005750</b>	---	---
Sample Date		Client Info		<b>13 May 2024</b>	---	---
Machine Age	hrs	Client Info		<b>669</b>	---	---
Oil Age	hrs	Client Info		<b>123</b>	---	---
Filter Age	hrs	Client Info		<b>123</b>	---	---
Oil Changed		Client Info		<b>Not Changd</b>	---	---
Filter Changed		Client Info		<b>N/A</b>	---	---
Sample Status				<b>SEVERE</b>	---	---

## WEAR

Aluminum ppm levels are abnormal. Piston wear is indicated.

Iron	ppm	ASTM D5185m	>125	<b>54</b>	---	---
Chromium	ppm	ASTM D5185m	>5	<b>4</b>	---	---
Nickel	ppm	ASTM D5185m	>4	<b>4</b>	---	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>25	<b>▲ 92</b>	---	---
Lead	ppm	ASTM D5185m	>15	<b>1</b>	---	---
Copper	ppm	ASTM D5185m	>125	<b>85</b>	---	---
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---

## CONTAMINATION

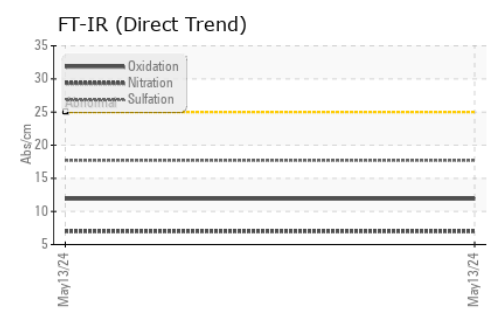
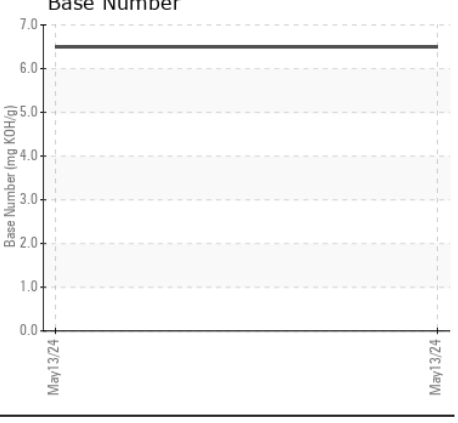
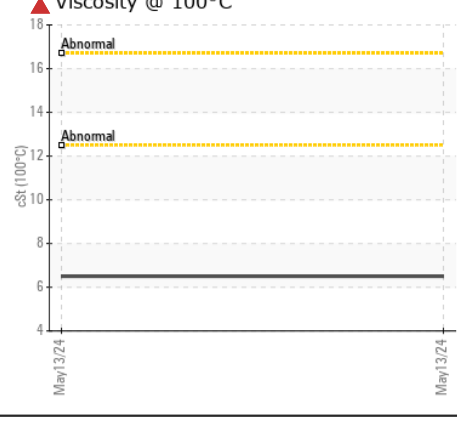
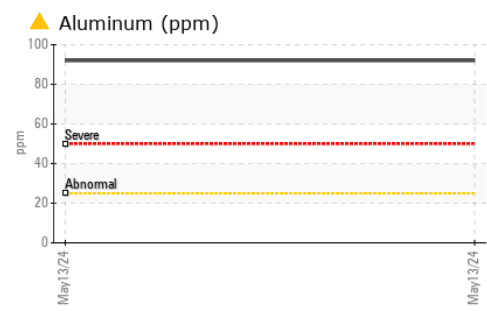
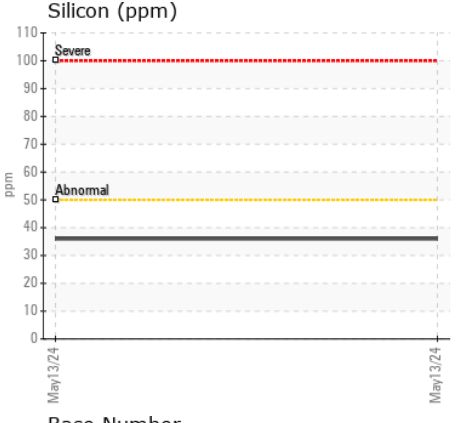
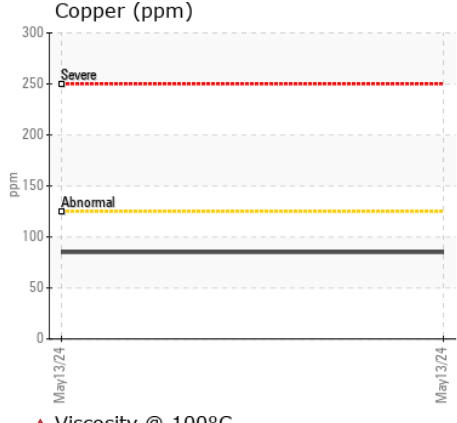
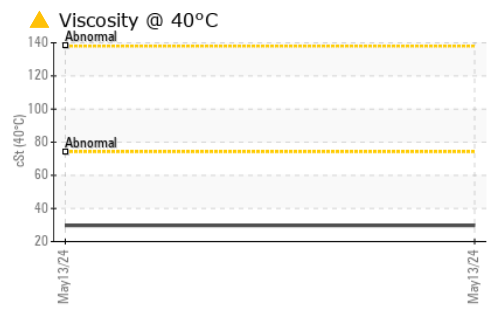
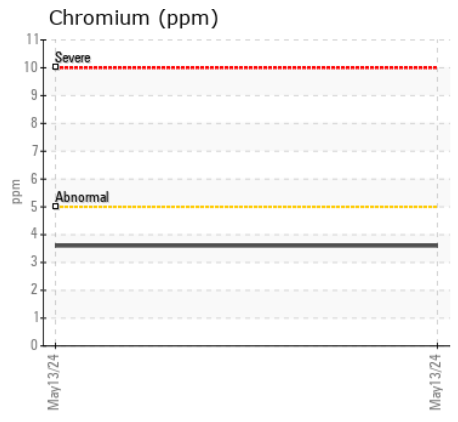
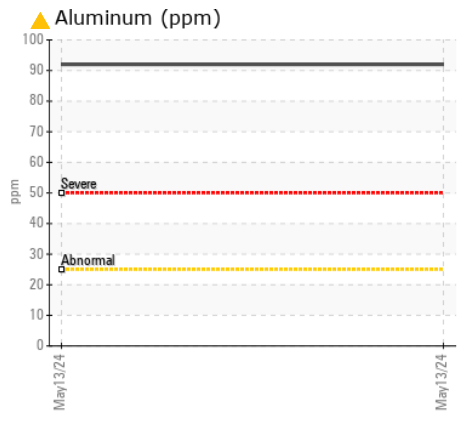
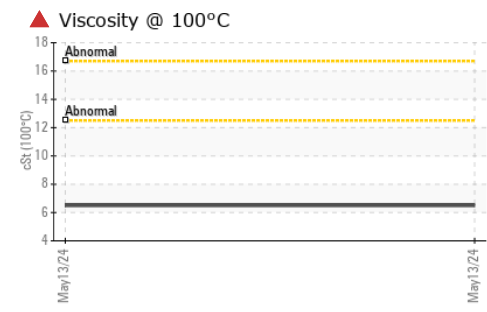
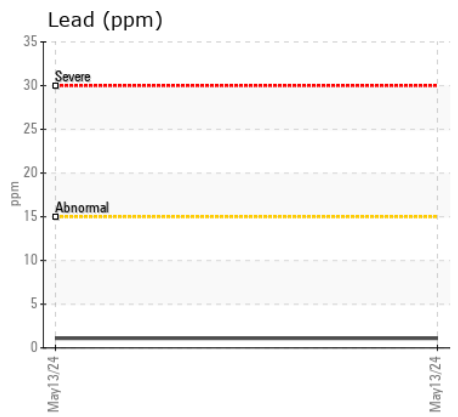
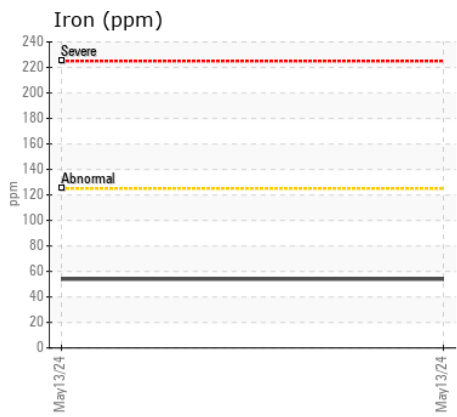
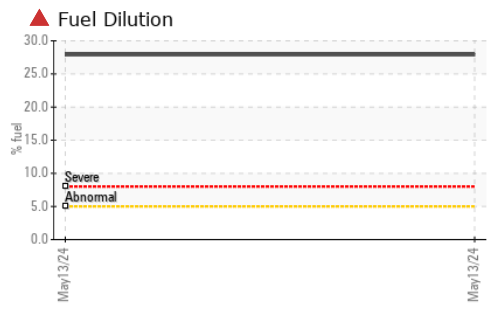
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>36</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>8</b>	---	---
Fuel	%	ASTM D3524	>5	<b>▲ 27.9</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	---	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.0</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.7</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	---	---

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185m		<b>2</b>	---	---
Boron	ppm	ASTM D5185m		<b>115</b>	---	---
Barium	ppm	ASTM D5185m		<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m		<b>13</b>	---	---
Manganese	ppm	ASTM D5185m		<b>1</b>	---	---
Magnesium	ppm	ASTM D5185m		<b>55</b>	---	---
Calcium	ppm	ASTM D5185m		<b>1447</b>	---	---
Phosphorus	ppm	ASTM D5185m		<b>644</b>	---	---
Zinc	ppm	ASTM D5185m		<b>768</b>	---	---
Sulfur	ppm	ASTM D5185m		<b>2492</b>	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.9</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.5</b>	---	---
Visc @ 40°C	cSt	ASTM D445		<b>▲ 29.7</b>	---	---
Visc @ 100°C	cSt	ASTM D445		<b>▲ 6.5</b>	---	---
Viscosity Index (VI)	Scale	ASTM D2270		<b>181</b>	---	---



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JCB005750 **Received** : 14 May 2024  
**Lab Number** : 06178584 **Tested** : 16 May 2024  
**Unique Number** : 11029910 **Diagnosed** : 16 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, KV40, PercentFuel, TBN, VI )

**VALLEY SUPPLY & EQUIPMENT CO INC - BALTIMORE**  
 1109 MIDDLE RIVER RD  
 BALTIMORE, MD  
 US 21220  
 Contact: GEORGE VINCENT  
 gvincent@valleysupplyequipment.com  
 T: (410)780-4000  
 F: (240)420-5999

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)