



# ASCENDUM

## OIL ANALYSIS REPORT

WEAR

**NORMAL**

CONTAMINATION

**ABNORMAL**

FLUID CONDITION

**NORMAL**



Area

**Ascendum Machinery/250 Hour CSA**

Machine Id

**CATERPILLAR D6M XL 537 (S/N 9ZM00395)**

Component

**Hydraulic System**

Fluid

**VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)**

### RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ASC0007050</b>	VCP425933	VCP0002813
Sample Date		Client Info		<b>11 Apr 2024</b>	20 Jul 2023	02 Jan 2023
Machine Age	hrs	Client Info		<b>17076</b>	17076	16650
Oil Age	hrs	Client Info		<b>17076</b>	0	16650
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Filter Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<b>&lt;1</b>	4	4
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>&lt;1</b>	2	2
Lead	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>75	<b>1</b>	3	3
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

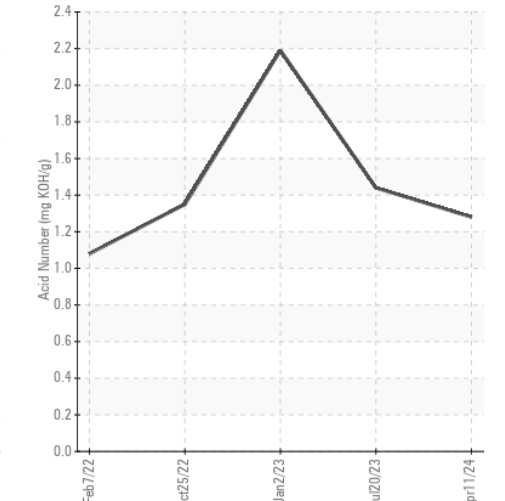
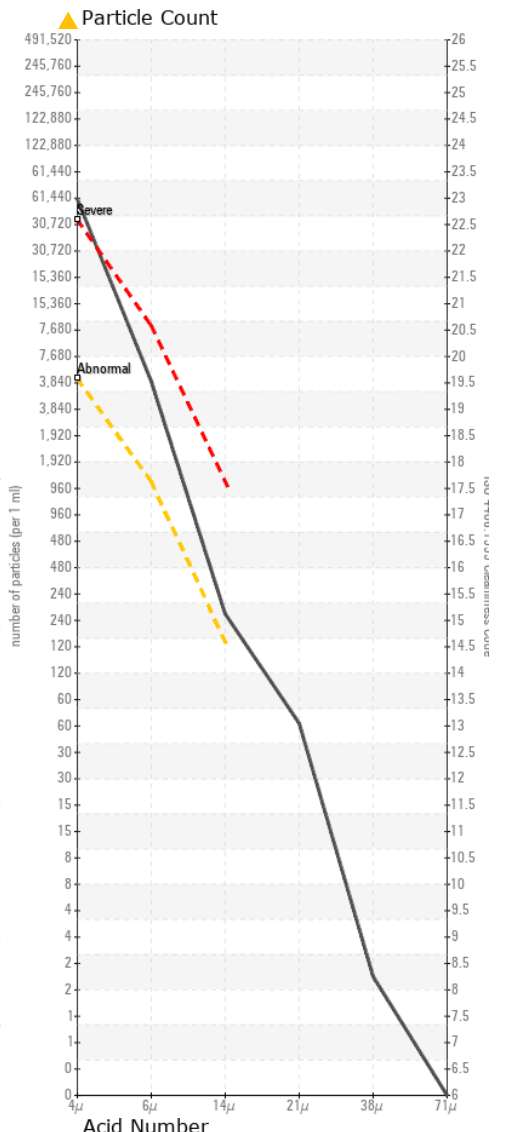
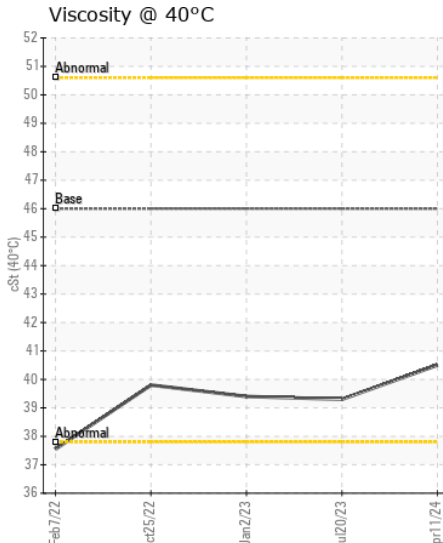
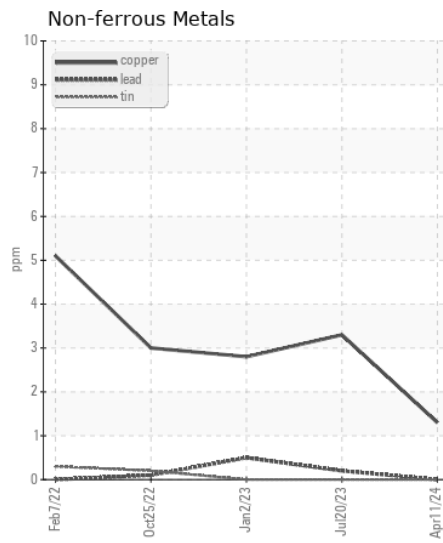
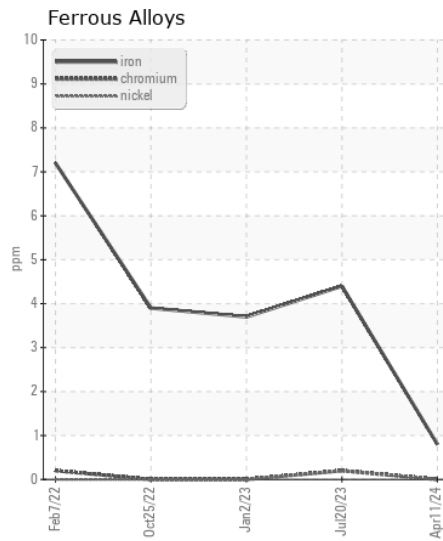
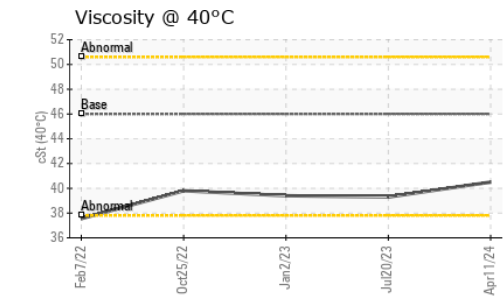
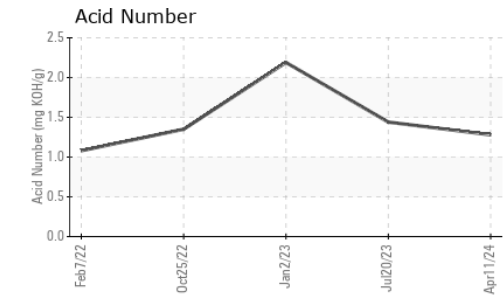
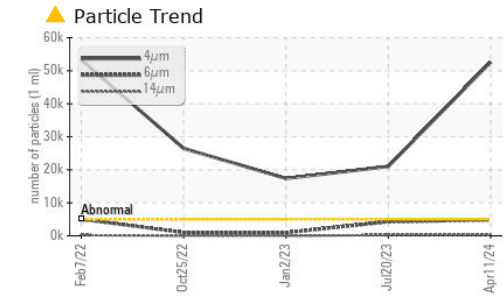
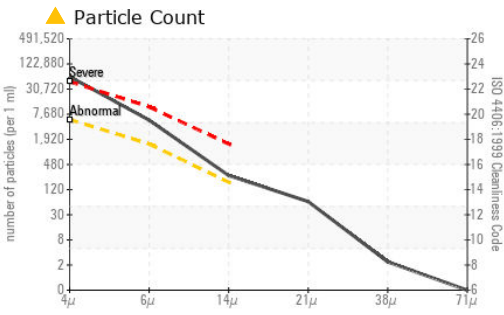
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>9</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>▲ 52582</b>	▲ 21026	▲ 17366
Particles >6µm		ASTM D7647	>1300	<b>▲ 4829</b>	▲ 4283	944
Particles >14µm		ASTM D7647	>160	<b>▲ 230</b>	▲ 231	13
Particles >21µm		ASTM D7647	>40	<b>▲ 55</b>	▲ 45	5
Particles >38µm		ASTM D7647	>10	<b>2</b>	1	1
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>▲ 23/19/15</b>	▲ 22/19/15	▲ 21/17/11
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	VLITE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	1
Boron	ppm	ASTM D5185m	14	<b>2</b>	3	4
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.0	<b>0</b>	3	3
Manganese	ppm	ASTM D5185m	0.0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	2.6	<b>286</b>	473	516
Calcium	ppm	ASTM D5185m	49	<b>1261</b>	1286	1132
Phosphorus	ppm	ASTM D5185m	354	<b>767</b>	866	856
Zinc	ppm	ASTM D5185m	419	<b>895</b>	1043	1006
Sulfur	ppm	ASTM D5185m	3719	<b>2843</b>	2956	3335
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.28</b>	1.44	2.19
Visc @ 40°C	cSt	ASTM D445	46	<b>40.5</b>	39.3	39.4



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0007050  
**Lab Number** : 06148581  
**Unique Number** : 10978659  
**Test Package** : CONST  
**Received** : 15 Apr 2024  
**Tested** : 16 Apr 2024  
**Diagnosed** : 17 Apr 2024 - Don Baldrige

**TRIANGLE GRADING AND PAVING INC**  
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 US 27216  
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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)