



# PROBLEM SUMMARY



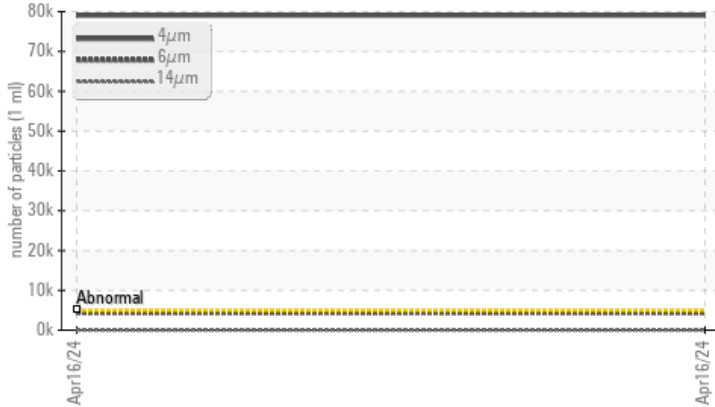
Area  
**MINING**  
 Machine Id  
**ME-6 CATERPILLAR 257D ME-6 CATERPILLAR 257D SKIDSTEE**  
 Component  
**Hydraulic System**  
 Fluid  
**SHELL Spirax S4 CX 10W (--- GAL)**

## Sample Rating Trend



## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. The filter change at the time of sampling has been noted. Resample in 30-45 days to monitor this situation.

## PROBLEMATIC TEST RESULTS

Sample Status			<b>SEVERE</b>	---	---
Particles >4µm	ASTM D7647	>5000	<b>▲ 79048</b>	---	---
Particles >6µm	ASTM D7647	>1300	<b>▲ 4389</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>▲ 23/19/12</b>	---	---

Customer Id: COVMEN  
 Sample No.: WC0919968  
 Lab Number: 06155836  
 Test Package: CONST



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To discuss the diagnosis or test data:  
 Wes Davis +1 905-569-8600 x223  
[wesd@wearcheck.ca](mailto:wesd@wearcheck.ca)

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

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

## HISTORICAL DIAGNOSIS



# OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area

**MINING**

Machine Id

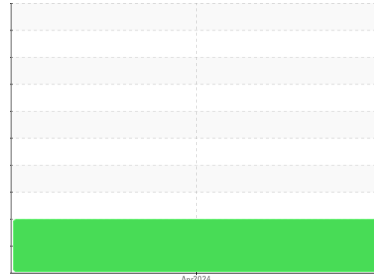
**ME-6 CATERPILLAR 257D ME-6 CATERPILLAR 257D SKIDSTEE**

Component

**Hydraulic System**

Fluid

**SHELL Spirax S4 CX 10W (--- GAL)**



## DIAGNOSIS

### ▲ Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. The filter change at the time of sampling has been noted. Resample in 30-45 days to monitor this situation.

### Wear

All component wear rates are normal.

### ▲ Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0919968</b>	---	---
Sample Date	Client Info		<b>16 Apr 2024</b>	---	---
Machine Age	hrs	Client Info	<b>2485</b>	---	---
Oil Age	hrs	Client Info	<b>270</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>SEVERE</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	<b>9</b>	---	---
Chromium	ppm	ASTM D5185m >10	<b>0</b>	---	---
Nickel	ppm	ASTM D5185m >10	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Lead	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m >75	<b>9</b>	---	---
Tin	ppm	ASTM D5185m >10	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>24</b>	---	---
Barium	ppm	ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	<b>7</b>	---	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>57</b>	---	---
Calcium	ppm	ASTM D5185m	<b>280</b>	---	---
Phosphorus	ppm	ASTM D5185m	<b>601</b>	---	---
Zinc	ppm	ASTM D5185m	<b>774</b>	---	---
Sulfur	ppm	ASTM D5185m	<b>2052</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>2</b>	---	---
Sodium	ppm	ASTM D5185m	<b>14</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	---	---

## FLUID CLEANLINESS

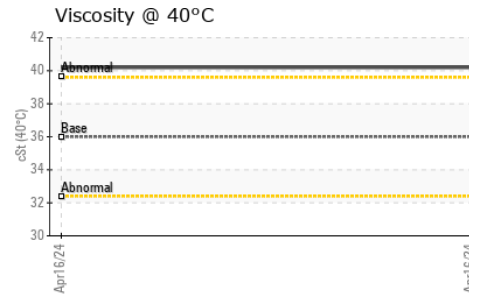
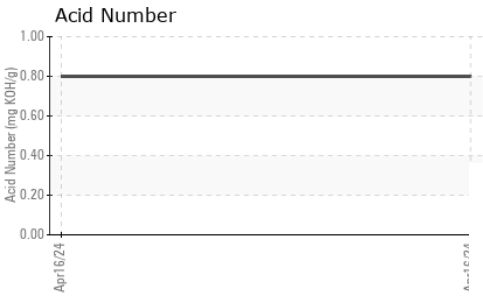
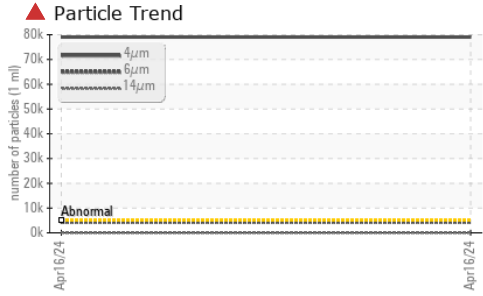
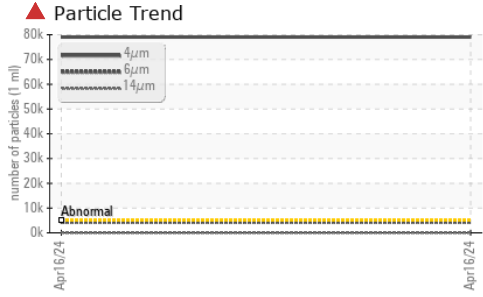
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>▲ 79048</b>	---	---
Particles >6µm	ASTM D7647	>1300	<b>▲ 4389</b>	---	---
Particles >14µm	ASTM D7647	>160	<b>27</b>	---	---
Particles >21µm	ASTM D7647	>40	<b>4</b>	---	---
Particles >38µm	ASTM D7647	>10	<b>0</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>▲ 23/19/12</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.80</b>	---	---



# OIL ANALYSIS REPORT



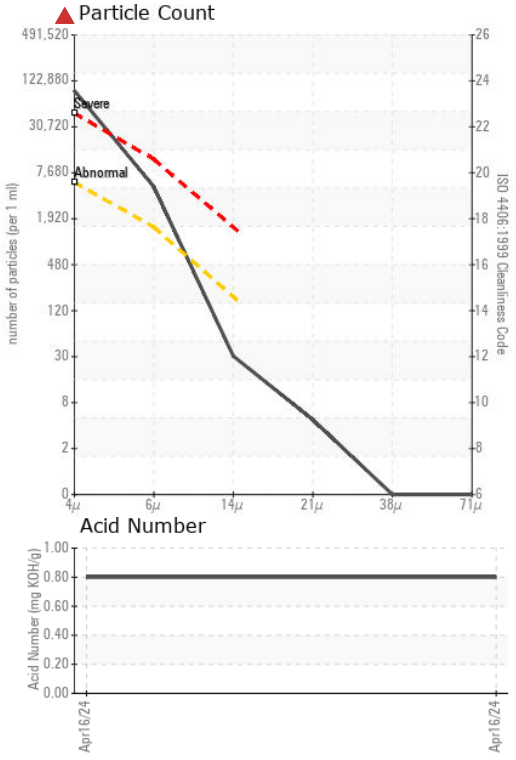
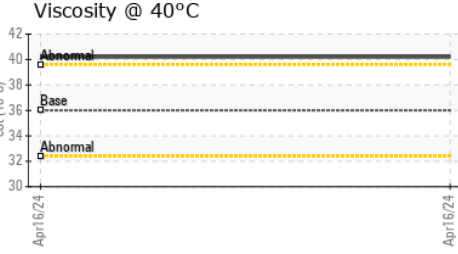
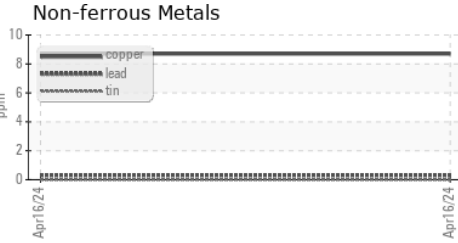
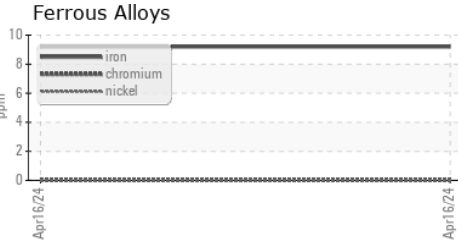
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	LIGHT	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 36	40.2	---	---

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

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0919968      **Received** : 22 Apr 2024  
**Lab Number** : 06155836      **Tested** : 23 Apr 2024  
**Unique Number** : 10991259      **Diagnosed** : 23 Apr 2024 - Wes Davis  
**Test Package** : CONST

**COVIA - MENOMONIE - 852**  
 N5628 580TH STREET  
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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)