



# PROBLEM SUMMARY



Machine Id  
**CATERPILLAR M1150**  
 Component  
**Natural Gas Engine**  
 Fluid  
**Natural Gas Engine Oil (9 GAL)**

## Sample Rating Trend

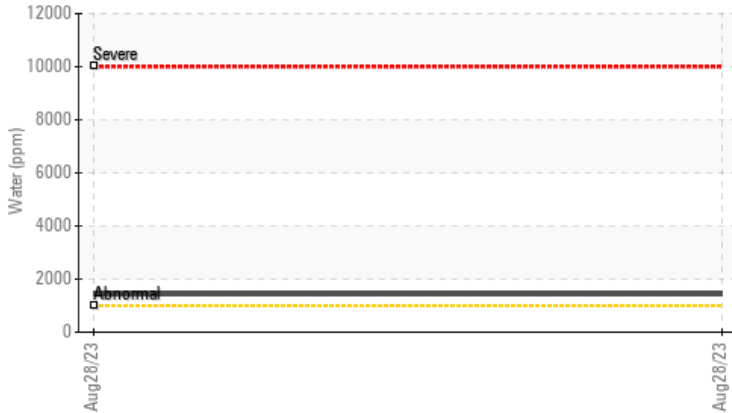


**WATER**



## COMPONENT CONDITION SUMMARY

### ▲ Water (KF)



## RECOMMENDATION

No corrective action is recommended at this time.  
 Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status				<b>ABNORMAL</b>	---	---
Water	%	ASTM D6304	>0.1	▲ <b>0.143</b>	---	---
ppm Water	ppm	ASTM D6304	>1000	▲ <b>1430</b>	---	---
Emulsified Water	scalar	*Visual	>0.1	▲ <b>0.2%</b>	---	---

Customer Id: SULLAP  
 Sample No.: RP0033674  
 Lab Number: 06014587  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Jonathan Hester +1 919-379-4092 x4092  
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To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

# OIL ANALYSIS REPORT

Sample Rating Trend

**WATER**



Machine Id  
**CATERPILLAR M1150**  
Component  
**Natural Gas Engine**  
Fluid  
**Natural Gas Engine Oil (9 GAL)**



## DIAGNOSIS

### ▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### ▲ Contamination

There is a light concentration of water present in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. 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	<b>RP0033674</b>	---	---
Sample Date	Client Info	<b>28 Aug 2023</b>	---	---
Machine Age	hrs	Client Info	<b>2532</b>	---
Oil Age	hrs	Client Info	<b>566</b>	---
Oil Changed	Client Info	<b>N/A</b>	---	---
Sample Status		<b>ABNORMAL</b>	---	---

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	<b>5</b>	---
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	---
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	---
Aluminum	ppm	ASTM D5185m >9	<b>2</b>	---
Lead	ppm	ASTM D5185m >30	<b>5</b>	---
Copper	ppm	ASTM D5185m >35	<b>3</b>	---
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	---

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	---
Barium	ppm	ASTM D5185m	<b>0</b>	---
Molybdenum	ppm	ASTM D5185m	<b>1</b>	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	---
Magnesium	ppm	ASTM D5185m	<b>6</b>	---
Calcium	ppm	ASTM D5185m	<b>1481</b>	---
Phosphorus	ppm	ASTM D5185m	<b>334</b>	---
Zinc	ppm	ASTM D5185m	<b>386</b>	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	<b>32</b>	---
Sodium	ppm	ASTM D5185m	<b>0</b>	---
Potassium	ppm	ASTM D5185m >20	<b>2</b>	---
Water	%	ASTM D6304 >0.1	<b>▲ 0.143</b>	---
ppm Water	ppm	ASTM D6304 >1000	<b>▲ 1430</b>	---
Glycol	%	*ASTM D2982	<b>0.0</b>	---

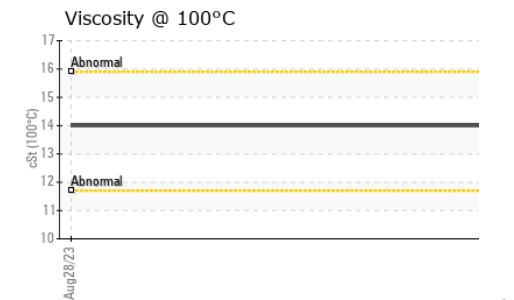
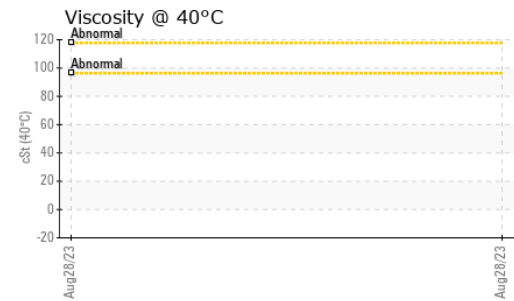
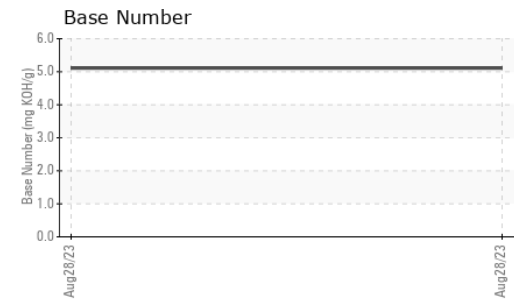
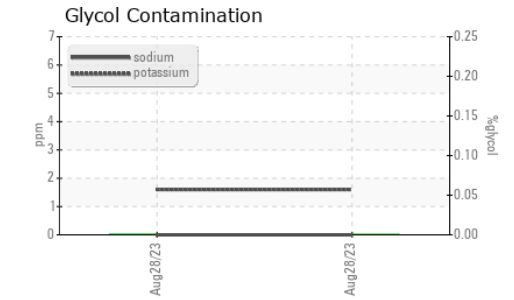
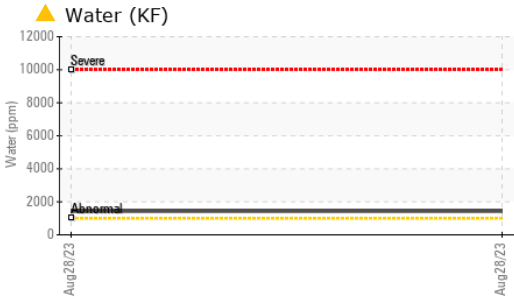
## INFRA-RED

method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0</b>	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.8</b>	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.2</b>	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.6</b>	---
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.25</b>	---
Base Number (BN)	mg KOH/g	ASTM D2896	<b>5.11</b>	---

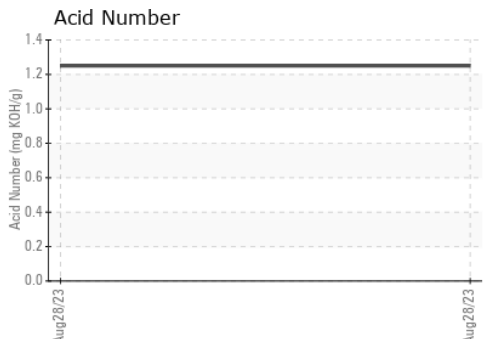
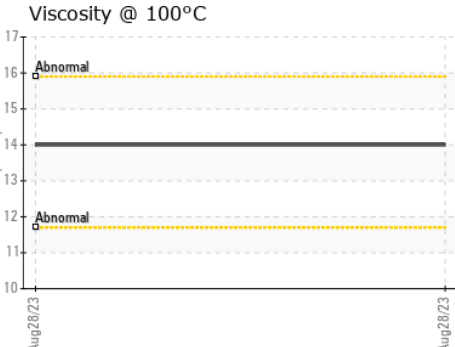
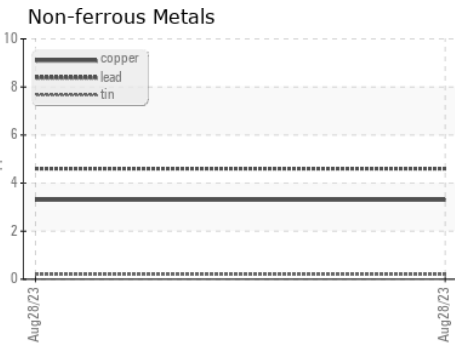
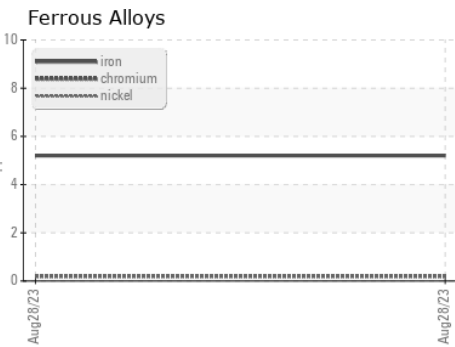
# OIL ANALYSIS REPORT



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	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	▲ 0.2%	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.0	---	---

**GRAPHS**



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0033674 **Received** : 21 Nov 2023  
**Lab Number** : 06014587 **Diagnosed** : 30 Nov 2023  
**Unique Number** : 10753731 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: FT-IR, Glycol, KV100, TBN )

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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)