

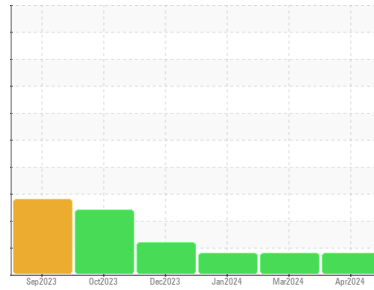


# OIL ANALYSIS REPORT



Machine Id  
**CATERPILLAR R1600 SCP219**  
 Component  
**Diesel Engine**  
 Fluid  
**MOBIL 15W40 (--- GAL)**

Sample Rating Trend



FUEL



## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

### Wear

All component wear rates are normal.

### Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

### Fluid Condition

The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0928368</b>	WC0902283	WC0897576
Sample Date	Client Info		<b>06 Apr 2024</b>	21 Mar 2024	14 Jan 2024
Machine Age	hrs	Client Info	<b>3621</b>	3250	2605
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Changed</b>	N/A	Changed
Sample Status			<b>MARGINAL</b>	ABNORMAL	MARGINAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	<b>30</b>	15	8
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>2</b>	<1	2
Lead	ppm	ASTM D5185(m)	>40	<b>4</b>	5	4
Copper	ppm	ASTM D5185(m)	>330	<b>4</b>	29	23
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	4	3
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<b>33</b>	30	40
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>40</b>	39	38
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)		<b>516</b>	508	485
Calcium	ppm	ASTM D5185(m)		<b>1782</b>	1735	1662
Phosphorus	ppm	ASTM D5185(m)		<b>729</b>	698	735
Zinc	ppm	ASTM D5185(m)		<b>896</b>	864	843
Sulfur	ppm	ASTM D5185(m)		<b>2163</b>	1976	2170
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

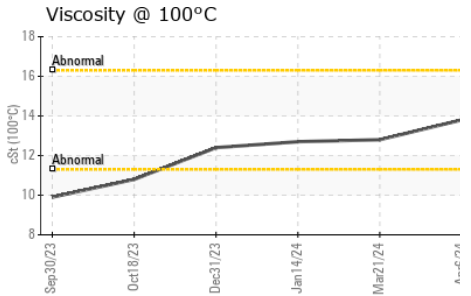
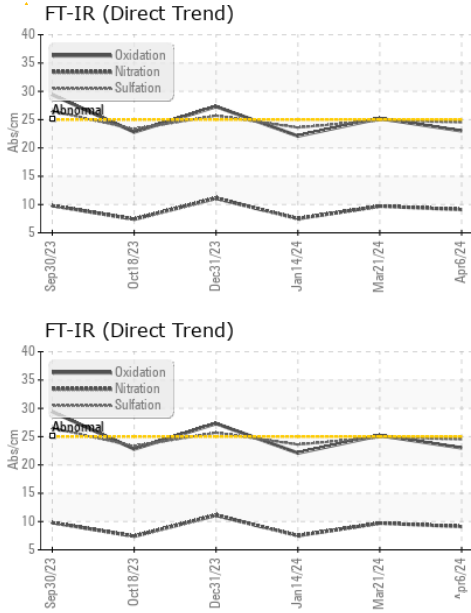
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>5</b>	3	4
Sodium	ppm	ASTM D5185(m)	>118	<b>3</b>	4	2
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	1	<1
Fuel	%	ASTM D7593*	>5	<b>▲ 2.6</b>	▲ 5.4	▲ 4

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	<b>0.4</b>	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.1</b>	9.7	7.5
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>24.5</b>	24.9	23.6



# OIL ANALYSIS REPORT

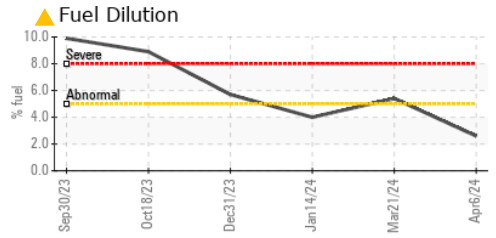
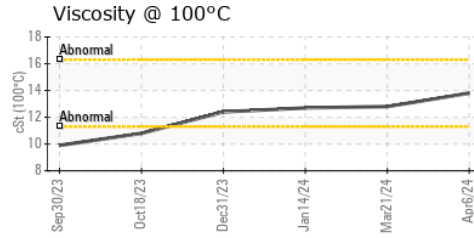
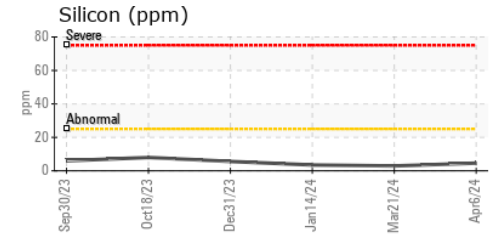
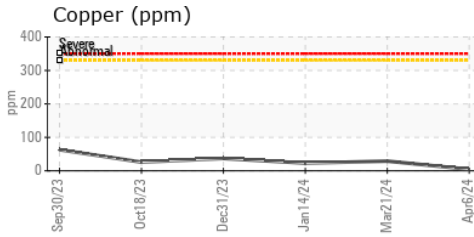
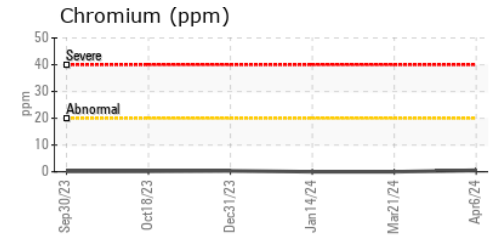
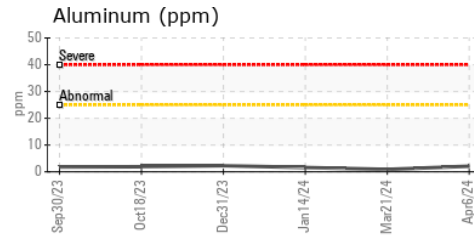
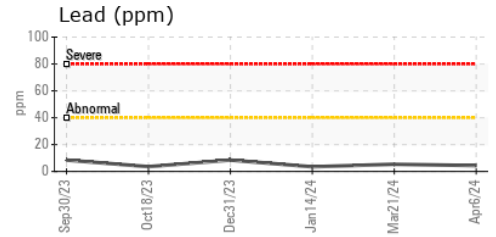
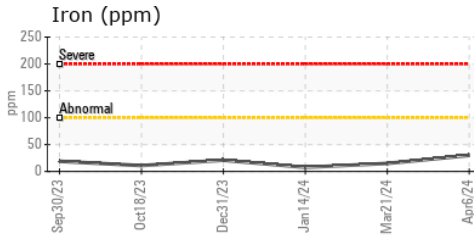


FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm ASTM D7414*	>25	<b>23.0</b>	25.2	22.1

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar Visual*	NONE	<b>VLITE</b>	---	---
Yellow Metal	scalar Visual*	NONE	<b>NONE</b>	---	---
Precipitate	scalar Visual*	NONE	<b>NONE</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>	NORML	NORML
Emulsified Water	scalar Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D7279(m)		<b>13.8</b>	12.8	12.7

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0928368 **Received** : 10 Apr 2024  
**Lab Number** : **02627798** **Tested** : 11 Apr 2024  
**Unique Number** : 5760930 **Diagnosed** : 11 Apr 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel, Visual )

**Agnico Eagle Canada**  
 1350 Government Rd. W, MACASSA COMPLEX  
 Kirkland Lake, ON  
 CA P2N 3J1  
 Contact: Phil St-Denis  
 Phil.St-Denis@agnicoeagle.com  
 T: (705)567-5208  
 F: (705)567-5221

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.