

# **OIL ANALYSIS REPORT**

#### **IDT**

# Sample Rating Trend

## NORMAL



# **CATERPILLAR R1600 SCP219**

Component

Hydraulic System

Fluid

PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

# DIAGNOSIS

#### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the component(unconfirmed).

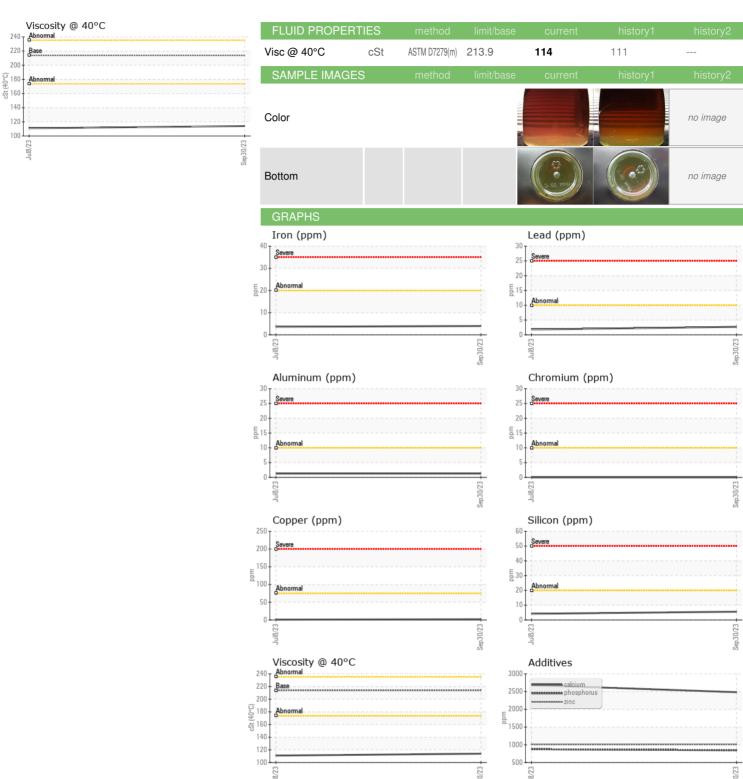
### **Fluid Condition**

Additive levels indicate the addition of a different brand, or type of oil. Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is acceptable for the time in service.

SAMPLE INFORM Sample Number	GAL)					
			Jul2023	Sep2023		
Sample Number	MATION	method	limit/base	current	history1	history2
Sample Mullibel		Client Info		WC0840212	WC0801050	
Sample Date		Client Info		30 Sep 2023	08 Jul 2023	
Machine Age	hrs	Client Info		1585	765	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	Not Changd	
Sample Status				NORMAL	NORMAL	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	4	4	
Chromium	ppm	ASTM D5185(m)	>10	0	0	
Nickel	ppm	ASTM D5185(m)	>10	0	0	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)		<1	0	
Aluminum	ppm	ASTM D5185(m)	>10	1	1	
Lead	ppm	ASTM D5185(m)	>10	3	2	
Copper	ppm	ASTM D5185(m)	>75	2	<1	
Tin	ppm	ASTM D5185(m)	>10	0	0	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	2	11	2	
Barium	ppm	ASTM D5185(m)	0	<1	0	
Molybdenum	ppm	ASTM D5185(m)	0	18	2	
Manganese	ppm	ASTM D5185(m)	0	0	<1	
Magnesium	ppm	ASTM D5185(m)	9	240	33	
Calcium	ppm	ASTM D5185(m)	3114	2483	2683	
Phosphorus	ppm	ASTM D5185(m)	1099	846	874	
Zinc	ppm	ASTM D5185(m)	1245	1009	1008	
Sulfur	ppm	ASTM D5185(m)	7086	4368	E444	
					5111	
Lithium	ppm	ASTM D5185(m)		<1	<1	
Lithium CONTAMINANTS		ASTM D5185(m) method	limit/base			
CONTAMINANTS			limit/base	<1	<1	
CONTAMINANTS		method		<1 current	<1 history1	history2
CONTAMINANTS Silicon Sodium	ppm	method ASTM D5185(m)		<1 current	<1 history1	history2
CONTAMINANTS Silicon Sodium	ppm ppm	method ASTM D5185(m) ASTM D5185(m)	>20	current  6 3	<1 history1 4 <1	history2
CONTAMINANTS Silicon Sodium Potassium VISUAL	ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20	<1 current 6 3 <1	<1 history1 4 <1 <1	history2 
CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal	ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method	>20 >20 limit/base	current 6 3 <1	<1 history1 4 <1 <1 history1	history2 history2 history2
CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal	ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) astm D5185(m) method Visual*	>20 >20 limit/base NONE	<1 current 6 3 <1 current NONE	<1 history1 4 <1 <1 <1 history1 NONE	history2 history2 history2
CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method Visual* Visual*	>20 >20 limit/base NONE NONE	<1 current 6 3 <1 current NONE NONE	<1 history1 4 <1 <1 history1 NONE NONE	history2 history2 history2
CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm scalar scalar	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method Visual* Visual*	>20 >20 limit/base NONE NONE NONE	<1 current 6 3 <1 current NONE NONE VLITE	history1  4  <1 <1 <1 NONE NONE NONE	history2 history2 history2
CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm scalar scalar scalar	method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  Visual*  Visual*  Visual*  Visual*	>20 >20 limit/base NONE NONE NONE	<1 current 6 3 <1 current NONE NONE VLITE NONE	<1 history1  4 <1 <1 history1  NONE NONE NONE NONE NONE	history2 history2 history2
CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm scalar scalar scalar scalar	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method Visual* Visual* Visual* Visual* Visual*	>20 separate	current  6 3 <1 current NONE NONE VLITE NONE NONE NONE	<1 history1  4 <1 <1 history1  NONE NONE NONE NONE VLITE	history2 history2
CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm scalar scalar scalar scalar scalar	method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*	>20 simit/base NONE NONE NONE NONE NONE NONE NONE NON	current  6 3 <1 current NONE NONE VLITE NONE NONE NONE NONE NONE NONE	<1 history1  4 <1 <1 history1  NONE NONE NONE NONE VUITE NONE	history2 history2
CONTAMINANTS Silicon Sodium Potassium  VISUAL  White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	ppm ppm scalar scalar scalar scalar scalar scalar	method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*	>20 simit/base NONE NONE NONE NONE NONE NONE NONE NON	current  6 3 <1 current NONE NONE VLITE NONE NONE NONE NONE NONE NONE NONE NO	history1  4 <1 <1 <1 NONE NONE NONE NONE NONE NONE NONE NON	history2 history2 history2
Silicon Sodium Potassium	ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*	>20 simit/base NONE NONE NONE NONE NONE NONE NONE NON	<1 current  6 3 <1 current  NONE NONE VLITE NONE NONE NONE NONE NONE NORML NORML	<1   history1   4   <1   <1	history2 history2 history2



# **OIL ANALYSIS REPORT**





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5657699

Test Package : MOB 1

: WC0840212

: 02588633

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received : 12 Oct 2023 Diagnosed

: 12 Oct 2023 Diagnostician : Kevin Marson

Agnico Eagle Canada 1350 Government Rd. W, MACASSA COMPLEX

Kirkland Lake, ON CA P2N 3J1

Contact: Tony Tees tony.tees@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.

Report Id: KIR370KIR [WCAMIS] 02588633 (Generated: 10/12/2023 15:01:22) Rev: 1

Contact/Location: Tony Tees - KIR370KIR