

# **OIL ANALYSIS REPORT**

#### Sample Rating Trend

# Sample Hading Hend

### VISCOSITY



# EPIROC MT65 TRK219

Component

**Transmission (Manual)** 

MOBIL 15W40 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as MOBIL 15W40, however, a fluid match indicates that this fluid is SAE 90 Gear Oil. Please confirm the fluid type and grade on your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the fluid.

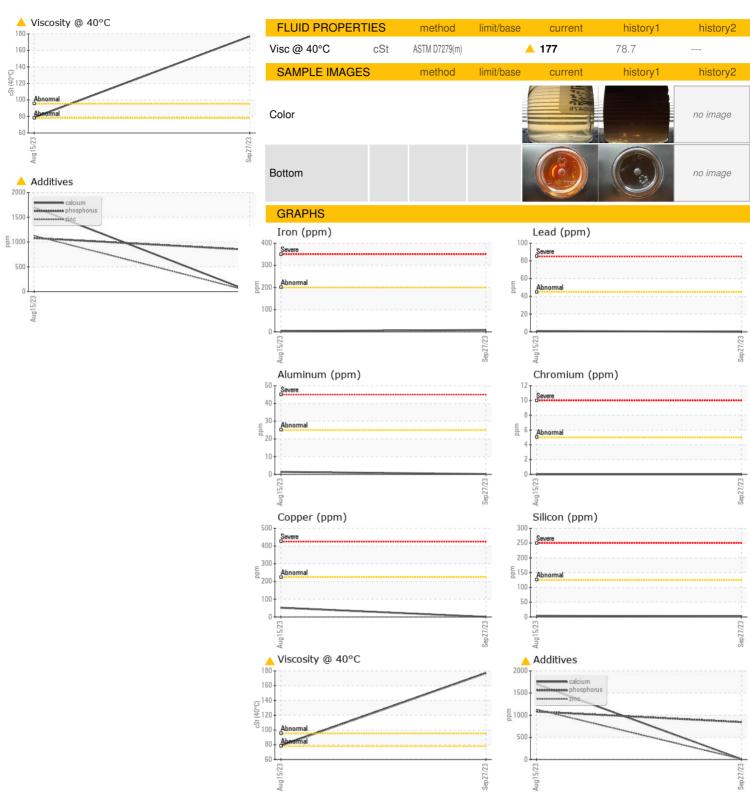
#### ▲ Fluid Condition

Viscosity of sample indicates oil is within SAE 90 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the fluid is acceptable for the time in service.

		<u>k</u>	Aug2023	Sep2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0750476	WC0750507	
Sample Date		Client Info		27 Sep 2023	15 Aug 2023	
Machine Age	hrs	Client Info		6884	6580	
Oil Age	hrs	Client Info		500	500	
Oil Changed		Client Info		Not Changd	Not Changd	
Sample Status				ABNORMAL	NORMAL	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>200	8	3	
Chromium	ppm	ASTM D5185(m)	>5	0	0	
Nickel	ppm	ASTM D5185(m)	>5	<1	0	
Titanium	ppm	ASTM D5185(m)		0	<1	
Silver	ppm	ASTM D5185(m)	>7	<1	<1	
Aluminum	ppm	ASTM D5185(m)	>25	<1	1	
Lead	ppm	ASTM D5185(m)	>45	0	1	
Copper	ppm	ASTM D5185(m)	>225	<1	52	
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)		75	122	
Barium	ppm	ASTM D5185(m)		<1	0	
Molybdenum	ppm	ASTM D5185(m)		0	26	
Manganese	ppm	ASTM D5185(m)		0	0	
Magnesium	ppm	ASTM D5185(m)		<u>^</u> 2	384	
Calcium	ppm	ASTM D5185(m)		<u>^</u> 9	1700	
		/10 TW D0 T00(III)		<u> </u>	1700	
Phosphorus	ppm	ASTM D5185(m)		843	1700	
Phosphorus Zinc						
	ppm	ASTM D5185(m)		843	1080	
Zinc	ppm	ASTM D5185(m) ASTM D5185(m)		843 <b>1</b> 0	1080 1128	
Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	843 10 18028	1080 1128 2938	
Zinc Sulfur Lithium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base >125	843 ^ 10 ^ 18028 <1	1080 1128 2938 <1	
Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method		843 ▲ 10 ▲ 18028 <1	1080 1128 2938 <1 history1	  history2
Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  METHOD  ASTM D5185(m)	>125	843 10 18028 <1 current	1080 1128 2938 <1 history1	   history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	>125 >118	843 10 18028 <1 current 2 2	1080 1128 2938 <1 history1 4	  history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  Method ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	>125 >118 >20	843 10 18028 <1 current 2 2 1	1080 1128 2938 <1 history1 4 2	  history2 
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method	>125 >118 >20 limit/base	843  10  18028  1  current  2  1  current	1080 1128 2938 <1 history1 4 2 5	  history2 
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  Method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  Wethod  Visual*	>125 >118 >20 limit/base	843  10  18028  1  current  2  2  1  current  VLITE	1080 1128 2938 <1 history1 4 2 5 history1 NONE	history2 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm ppm scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  Method Visual*	>125 >118 >20 limit/base NONE NONE	843  10  18028  11  current  2  2  1  current  VLITE  NONE	1080 1128 2938 <1 history1 4 2 5 history1 NONE	history2 history2
Zinc Sulfur Lithium  CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  Wisual*  Visual*  Visual*	>125 >118 >20 limit/base NONE NONE NONE	843  10  18028  1 current  2 2 1 current  VLITE NONE NONE	1080 1128 2938 <1 history1 4 2 5 history1 NONE NONE NONE	history2 history2
Zinc Sulfur Lithium  CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  ASTM D5185(m)  Wethod Visual* Visual* Visual*	>125 >118 >20 limit/base NONE NONE NONE NONE	843  10  18028  1 current  2  2  1 current  VLITE  NONE  NONE  NONE	1080 1128 2938 <1 history1 4 2 5 history1 NONE NONE NONE NONE	history2 history2
Zinc Sulfur Lithium  CONTAMINANTS Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  METHOD  ASTM D5185(m)  METHOD  Visual*  Visual*  Visual*  Visual*	>125 >118 >20 limit/base NONE NONE NONE NONE NONE NONE	843  10  18028  1 current  2  1 current  VLITE  NONE  NONE  NONE  NONE	1080 1128 2938 <1 history1 4 2 5 history1 NONE NONE NONE NONE NONE NONE NONE	history2 history2
Zinc Sulfur Lithium  CONTAMINANTS Silicon Sodium Potassium  VISUAL  White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  Method  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*	>125 >118 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	843  10  18028  11  current  2  1  current  VLITE  NONE  NONE  NONE  NONE  NONE  NONE  NONE	1080 1128 2938 <1 history1 4 2 5 history1 NONE NONE NONE NONE NONE NONE NONE NON	history2 history2
Zinc Sulfur Lithium  CONTAMINANTS Silicon Sodium Potassium  VISUAL  White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  Wisual* Visual* Visual* Visual* Visual* Visual* Visual* Visual* Visual* Visual*	>125 >118 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	843  A 10  A 18028  <1  current  2  2  1  current  VLITE  NONE  NORML	1080 1128 2938 <1 history1 4 2 5 history1 NONE NONE NONE NONE NONE NONE NONE NON	history2 history2



## **OIL ANALYSIS REPORT**





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number **Unique Number** Test Package : MOB 1

: WC0750476 : 02588676

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received Diagnosed : 5657742 Diagnostician : Kevin Marson

: 12 Oct 2023 : 13 Oct 2023

Agnico Eagle Canada 1350 Government Rd. W, MACASSA COMPLEX Kirkland Lake, ON **CA P2N 3J1** 

Contact: Mike Campbell mike.campbell@agnicoeagle.com

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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.