

## **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL

#### Machine Id

# **EPIROC T1D JUMBO22**

Component Diesel Engine Fluid

### SAE 15W40 (--- GAL)

#### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Wear

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

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

SAMPLE INFORM	<b>MATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0959990		
Sample Date		Client Info		30 Jun 2024		
Machine Age	hrs	Client Info		494		
Oil Age	hrs	Client Info		250		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	6		
Chromium	ppm	ASTM D5185(m)	>20	<1		
Nickel	ppm	ASTM D5185(m)	>4	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>3	0		
Aluminum	ppm	ASTM D5185(m)	>20	2		
Lead	ppm	ASTM D5185(m)	>40	0		
Copper	ppm	ASTM D5185(m)	>330	1		
Tin	ppm	ASTM D5185(m)	>15	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		53		
Barium	ppm	ASTM D5185(m)		0		
Molybdenum	ppm	ASTM D5185(m)		40		
Manganese	ppm	ASTM D5185(m)		<1		
Magnesium	ppm	ASTM D5185(m)		489		
Calcium	ppm	ASTM D5185(m)		1643		
Phosphorus	ppm	ASTM D5185(m)		718		
Zinc	ppm	ASTM D5185(m)		852		
Sulfur	ppm	ASTM D5185(m)		2081		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	9		
Sodium	ppm	ASTM D5185(m)		3		
Potassium	ppm	ASTM D5185(m)	>20	<1		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0		
Nitration	Abs/cm	ASTM D7624*	>20	6.2		
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.6		
				•		



3

30

25 4ps/cm

10

140 Base 120 Base (),0),110 5,0),110 5,100 90

140 - A 130 -120 - B (0,0+) 35 100 -90 -

80 **Abnorma** 

FT-IR (Direct Trend)

Oxidation

Nitration

Viscosity @ 40°C

Viscosity @ 40°C

# **OIL ANALYSIS REPORT**

FLUID DEGRADA	TION	method	limit/base	current	history1	history
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.0		
VISUAL		method	limit/base	current	history1	history
White Metal	scalar	Visual*	NONE	VLITE		
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		Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*	>0.2	NEG		
Free Water	scalar	Visual*		NEG		
FLUID PROPERT	IES	method	limit/base	current	history1	history
Visc @ 40°C	cSt	ASTM D7279(m)	115	101		
Visc @ 100°C	cSt	ASTM D7279(m)	14.5	13.4		
Viscosity Index (VI)	Scale	ASTM D2270*	128	131		
GRAPHS						
Iron (ppm)			100	Lead (ppm)		
Smarp				Severe		
E Abnormal			톱 50	Abnormal		
0			54			
0				Jun30/24		
Jun30/24			Jun30/24	Jun30/24	pm)	
0				Chromium (p	pm)	
Aluminum (ppm)			40024	Chromium (p	pm)	
Aluminum (ppm)			Jun 30/24	Chromium (p	pm)	
Aluminum (ppm)			Jun30/24	Chromium (p	pm)	
Aluminum (ppm)			60 40 2007	Chromium (p	pm)	
Aluminum (ppm)			42002ung 40 40 20	Chromium (p	pm)	
Aluminum (ppm)			42002 mg 44 40 2002 mg	b200gung Chromium (p Severe Abnormal b20gung Silicon (ppm)	pm)	
Aluminum (ppm)			40 40 40 40 40 40 40 40 40 40 40 40 40 4	brochromium (p	pm)	
Aluminum (ppm)			42000 mg 42000 mg 4200000 mg 42000 mg 42000000000000000000000000000000000000	Chromium (p	pm)	
Aluminum (ppm)			40 40 80 80 80 80 80 80 80 80 80 80 80 80 80	brong of the severe abnormal brong of the sev	pm)	
Aluminum (ppm)			40 40 40 40 40 40 40 40 40 40 40 40 40 4	brongener Chromium (p Severe Abnomal Silicon (ppm) Severe Abnomal	pm)	
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Aluminum (ppm)			40 2005 100 100 100 100 100 100 100 100 100	brong in the server ser	pm)	
Aluminum (ppm)			40 40 40 40 40 40 40 40 40 40 40 40 40 4	brongung Chromium (p Abnormal brongung Silicon (ppm) Severe Abnormal brongung Soot %	pm)	
Aluminum (ppm)			40 40 40 40 40 40 40 40 40 40 40 40 40 4	brongung Chromium (p Severe Abnormal brongung Silicon (ppm) Severe Abnormal brongung Soot %	pm)	
Aluminum (ppm) Aluminum (ppm) Aluminum (ppm) Copper (ppm) Copper (ppm) Viscosity @ 100°C			40 40 40 40 40 40 40 40 40 40 40 40 40 4	brongung Chromium (p Severe Abnormal brongung Silicon (ppm) Severe Abnormal brongung Soot %	pm)	
Aluminum (ppm) Aluminum (ppm) Aluminum (ppm) Copper (ppm) Copper (ppm) Viscosity @ 100°C			40 10024 1003024 1	brongung Chromium (p Severe Abnormal brongung Silicon (ppm) Severe Abnormal brongung Soot %	pm)	
Aluminum (ppm)			40 40 40 40 40 40 40 40 40 40 40 40 40 4	brongening Chromium (p Severe Abnormal brongening Solution (ppm) Severe Abnormal brongening Soot % Severe Abnormal	pm)	

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Agnico Eagle Canada CALA Sample No. : WC0959990 Received : 04 Jul 2024 1350 Government Rd. W, MACASSA COMPLEX Lab Number : 02645401 Tested : 05 Jul 2024 Kirkland Lake, ON ISO 17025:2017 Accredited Laboratory CA P2N 3J1 Unique Number : 5802940 Diagnosed : 05 Jul 2024 - Wes Davis Test Package : MOB 1 (Additional Tests: KV40, VI, Visual) Contact: Mitch Lamontagne AEM\_KL\_macassaoilsampleresults@agnicoeagle.com To discuss this sample report, contact Customer Service at 1-800-268-2131. T: (705)567-5208 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. F: (705)567-5221

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Contact/Location: Mitch Lamontagne - KIR370KIR