

## **OIL ANALYSIS REPORT**

#### Sample Rating Trend



### Machine Id 165340

#### Component Gearbox

# PETRO CANADA ENDURATEX EP 220 (--- GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

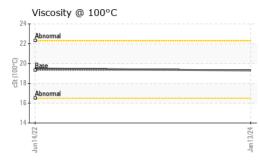
#### Fluid Condition

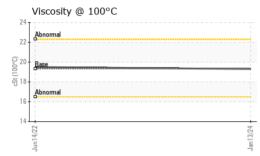
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

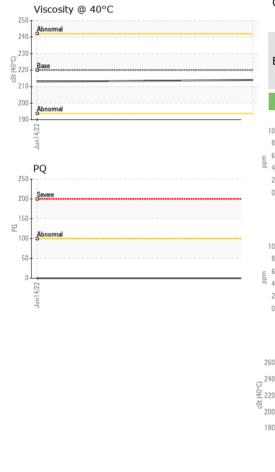
GAL)			Jun2022	Jan2024		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0077092	PC0058297	
Sample Date		Client Info		13 Jan 2024	14 Jun 2022	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
PQ		ASTM D8184*		0	0	
Iron	ppm	ASTM D5185(m)	>200	2	1	
Chromium	ppm	ASTM D5185(m)	>15	0	0	
Nickel	ppm	ASTM D5185(m)	>15	<1	<1	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)		0	0	
Aluminum	ppm	ASTM D5185(m)	>25	<1	0	
Lead	ppm	ASTM D5185(m)	>100	0	0	
Copper	ppm	ASTM D5185(m)	>200	<1	<1	
Tin	ppm	ASTM D5185(m)	>25	0	0	
Antimony	ppm	ASTM D5185(m)	>5	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)	60	39	52	
Barium	ppm	ASTM D5185(m)	0	0	0	
Molybdenum	ppm	ASTM D5185(m)	0	0	0	
Manganese	ppm	ASTM D5185(m)	0	0	0	
Magnesium	ppm	ASTM D5185(m)	0	<1	<1	
Calcium	ppm	ASTM D5185(m)	0	2	2	
Phosphorus	ppm	ASTM D5185(m)	270	214	225	
Zinc	ppm	ASTM D5185(m)	0	4	4	
Sulfur	ppm	ASTM D5185(m)	11200	6279	6189	
Lithium	ppm	ASTM D5185(m)		<1	<1	
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	11	6	
Sodium	ppm	ASTM D5185(m)		0	0	
Potassium	ppm	ASTM D5185(m)	>20	<1	1	
FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.40	0.42	0.31	



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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
Precipitate	scalar	Visual*	NONE	NONE	NONE	
Silt	scalar	Visual*	NONE	NONE	NONE	
Debris	scalar	Visual*	NONE	NONE	NONE	
Sand/Dirt	scalar	Visual*	NONE	NONE	VLITE	
Appearance	scalar	Visual*	NORML	NORML	NORML	
Odor	scalar	Visual*	NORML	NORML	NORML	
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	
Free Water	scalar	Visual*		NEG	NEG	
FLUID PROPER	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	220	214	213	
Visc @ 100°C	cSt	ASTM D7279(m)	19.35	19.3	19.5	
Viscosity Index (VI)	Scale	ASTM D2270*	99	101	104	
SAMPLE IMAG	ES	method	limit/base	current	history1	history2
Color						no image
Bottom						no image
GRAPHS						
Ferrous Alloys				PQ		
8			220	Samara		
6 - nickel			200	т ,		
4			180			
2			160			
			47 72/8			
Jun 14/22			120 Jan 13/24			
Non-ferrous Metals	5		100	Abnormal - o		
D			80			
copper			60			
announce tin			40			
2			20	+		
			5			
Jun 14/22			Jan 13/24	Jun 14/22		Jan 13/24
⊰ Viscosity @ 40°C			٦ و			Jan
T :			©0 50	Acid Number		
0 - Abnormal			第0.50 9 0.40 6 0.30 4 0.20 9 0.10	Base		
Base			트 0.30 ㅎ	-		
0 - Abnormal			- C.20	1		
				L.		
Jun 14/22			Jan 13/24	Jun14/22		Jan 13/24
WearCheck - C8-117 PC0077092 <b>R</b> 02610985 <b>D</b>	Recieved Diagnose Diagnost	d : 24 . ed : 25 .	lington, ON L Jan 2024 Jan 2024 s Davis		Box 3001, Contact: Adebul	Dryden Fibre 1 Duke Street Dryden, ON CA P8N 2Z7

**Test Package** : IND 2 (Additional Tests: KV100, TAN Man, VI) 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.

CALA

ISO 17025:2017 Accredited Laboratory

Laboratory

Sample No. Lab Number

**Unique Number** 

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