

## **OIL ANALYSIS REPORT**

Sample Rating Trend



# P1 FREEZER DRIVE

#### Component Gearbox

Fluid

### PETRO CANADA PURITY FG EP GEAR FLUID 460 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

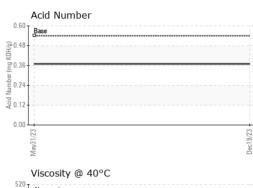
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

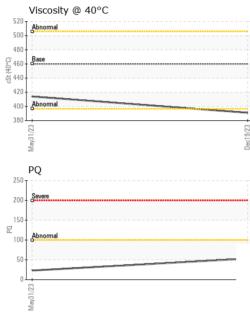
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0794757	WC0670581	
Sample Date		Client Info		19 Dec 2023	31 May 2023	
Machine Age	mths	Client Info		0	0	
Oil Age	mths	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	٧	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		53	23	
Iron	ppm	ASTM D5185m	>200	82	24	
Chromium	ppm	ASTM D5185m	>15	0	<1	
Nickel	ppm	ASTM D5185m	>15	0	0	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m		0	0	
Aluminum	ppm	ASTM D5185m	>25	0	<1	
Lead	ppm	ASTM D5185m	>100	0	0	
Copper	ppm	ASTM D5185m	>200	0	0	
Tin	ppm	ASTM D5185m	>25	0	0	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	
Barium	ppm	ASTM D5185m		0	0	
Molybdenum	ppm	ASTM D5185m		0	0	
Manganese	ppm	ASTM D5185m		0	<1	
Magnesium	ppm	ASTM D5185m		0	4	
Calcium	ppm	ASTM D5185m		<1	1	
Phosphorus	ppm	ASTM D5185m	135	122	157	
Zinc	ppm	ASTM D5185m		2	9	
Sulfur	ppm	ASTM D5185m	660	642	794	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	4	5	
Sodium	ppm	ASTM D5185m		<1	<1	
Potassium	ppm	ASTM D5185m	>20	1	<1	
FLUID DEGRADA		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.54	0.37	0.37	



## **OIL ANALYSIS REPORT**

VISUAL





	VISUAL		method			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	NONE	
		scalar	*Visual	NORML	NORML	NORML	
	Appearance Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
	Free Water	scalar	*Visual	20.L	NEG	NEG	
	FLUID PROPER	RTIES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D445	460	391	414	
	SAMPLE IMAGE	ES	method	limit/base	current	history1	history2
	-						
	Color Dec19/23				no image	no image	no image
	<u> </u>						
	Bottom				no image	no image	no image
	CRADUC						
	GRAPHS Ferrous Alloys				PQ		
				000	PQ		
	100 T			220.			
	80 - iron				Severe		
	80 - iron chromium			200	Severe		
	80 - iron chromium			200 · 180 ·	Severe		
	80 - iron E 60 - nickel			200	Severe		
	80 60 40 20			200 · 180 · 160 ·	Severe		
	80 60 40 20			200. 180. 160. 140.	Severe		
	80 60 40 20 0 521 521 52 60 40 521 52 60 50 50 50 50 50 50 50 50 50 50 50 50 50			200 - 180 - 160 - 140 -	Severe		
	80 60 40 20	als		200. 180. 160. 200. 160. 100. 100.			
	Non-ferrous Met	als		200. 180. 160. 140. 200. 140. 200. 140. 200. 140. 200. 140. 200. 200. 200. 200. 200. 200. 200. 2			
	Non-ferrous Met	als		200. 180. 160. 200. 160. 100. 100.			
	Non-ferrous Met	als		200. 180. 160. 140. 200. 140. 200. 140. 200. 140. 200. 140. 200. 200. 200. 200. 200. 200. 200. 2			
	Non-ferrous Met	als		200- 180- 160- 140- 20- 160- 120- 120- 100- 80- 80- 60-			
	Non-ferrous Met	als		200- 180- 160- 140- 20- 80- 80- 40- 20- 20- 20- 20- 20- 20- 20- 20- 20- 2	Abnormal		
	Non-ferrous Met	als		200- 180- 160- 140- 20- 80- 80- 40- 20- 20- 20- 20- 20- 20- 20- 20- 20- 2	Abnormal		
	Non-ferrous Met			200 - 180 - 160 - 140 - 200 - 100 - 100 - 80 - 80 - 60 - 40 -			
	Non-ferrous Met			200 180 160 120 100 100 0 0 0	Abnormal		
	Non-ferrous Met			200 180 160 120 100 100 0 0 0	Abnormal 6 6 7 7 7 7 8 7 8 7 8		
	Non-ferrous Met			200 180 160 120 100 100 0 0 0	Abnormal EZTIE/ew Acid Number		
	Non-ferrous Met			200 180 160 120 100 100 0 0 0	Abnormal EZTIE/ew Acid Number		
	Non-ferrous Met			200 180 160 120 100 100 0 0 0	Abnormal EZTIE/ew Acid Number		
	Non-ferrous Met			200. 180. 160. 120. 100.	Abnormal EZTIE/ew Acid Number		
	Non-ferrous Met			200. 180. 160. 120. 100.	Abnormal		
	Non-ferrous Met			200 180 160 120 100 100 0 0 0	Abnormal EZTIE/ew Acid Number		
Laboratory Sample No. Lab Numbe Unique Numk	Non-ferrous Met	- 501 Madis Recievec Diagnose	t :11. ed :14. ician :Dor	200 180 160 140 EZC 140 EZC 120 00 00 00 00 00 00 00 00 00	Abnormal	ZAI U	

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)