

## **OIL ANALYSIS REPORT**

#### Area MIX ROOM C [98749735] Machine Id KR-GR-001553-NORTH - 15000 MIXER (S/N MIX C - 11513064) Component

Gearbox

#### Fluid PETRO CANADA 220 (50 QTS)

### DIAGNOSIS

#### Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. ( Customer Sample Comment: 98749735 )

#### Wear

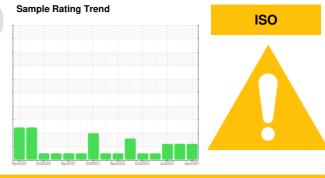
All component wear rates are normal.

#### Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

#### Fluid Condition

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

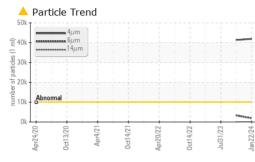


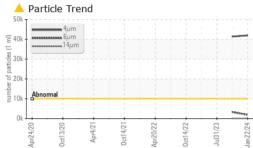
	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0108446	PCA0108241	PCA0103227
Sample Date		Client Info		22 Jan 2024	22 Oct 2023	31 Jul 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	69	99	71
Chromium	ppm	ASTM D5185m	>15	0	<1	<1
Nickel	ppm	ASTM D5185m	>15	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>25	1	4	0
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm		>200	<1	1	<1
Tin	ppm	ASTM D5185m	>25	0	1	0
Vanadium	ppm	ASTM D5185m	~	0	0	0
Cadmium		ASTM D5185m		0	0	0
	ppm				-	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		69	92	61
Barium	ppm	ASTM D5185m		0	22	3
Molybdenum	ppm	ASTM D5185m		350	510	383
Manganese	ppm	ASTM D5185m		2	4	3
Magnesium	ppm	ASTM D5185m		0	0	1
Calcium	ppm	ASTM D5185m		107	139	111
Calcium	ppin					
	ppm	ASTM D5185m		984	1485	1099
Phosphorus		ASTM D5185m ASTM D5185m		984 152	1485 218	1099 157
Phosphorus Zinc	ppm					
Phosphorus Zinc	ppm ppm ppm	ASTM D5185m	limit/base	152	218	157
Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm	ASTM D5185m ASTM D5185m method	limit/base	152 18084	218 42157	157 23069
Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ITS	ASTM D5185m ASTM D5185m method		152 18084 current	218 42157 history1	157 23069 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ITS	ASTM D5185m ASTM D5185m method ASTM D5185m	>50	152 18084 current 12	218 42157 history1 20	157 23069 history2 14
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	>50	152 18084 current 12 17	218 42157 history1 20 22	157 23069 history2 14 10
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI	ppm ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	>50 >20	152 18084 current 12 17 <1	218 42157 history1 20 22 2	157 23069 history2 14 10 3
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm	ppm ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>50 >20 limit/base	152 18084 current 12 17 <1 current	218 42157 history1 20 22 2 2 history1	157 23069 history2 14 10 3 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >6µm	ppm ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D7647	>50 >20 limit/base >10000	152 18084 current 12 17 <1 <1 current ▲ 41936	218 42157 20 22 2 <u>history1</u> ▲ 41360	157 23069 history2 14 10 3 history2 
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647	>50 >20 limit/base >10000 >2500	152 18084 current 12 17 <1 <1 current ▲ 41936 ▲ 1888	218 42157 <b>history1</b> 20 22 2 2 <b>history1</b> ▲ 41360 ▲ 3278	157 23069 history2 14 10 3 history2 
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	>50 >20 limit/base >10000 >2500 >640	152 18084 current 12 17 <1 <1 current ▲ 41936 ▲ 1888 39	218 42157 <b>history1</b> 20 22 2 <b>history1</b> ▲ 41360 ▲ 3278 88	157 23069 history2 14 10 3 history2  
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>50 >20 limit/base >10000 >2500 >640 >160	152 18084 current 12 17 <1 current ▲ 41936 ▲ 1888 39 9	218 42157 bistory1 20 22 2 bistory1 ▲ 41360 ▲ 3278 88 20	157 23069 history2 14 10 3 history2   
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>50 >20 limit/base >10000 >2500 >640 >160 >40	152 18084 current 12 17 <1 current ▲ 41936 ▲ 1888 39 9 1	218 42157 history1 20 22 2 history1 ▲ 41360 ▲ 3278 88 20 1	157 23069 history2 14 10 3 history2     
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >6µm Particles >14µm Particles >38µm Particles >71µm	ppm ppm ppm iTS ppm ppm ppm LINESS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>50 >20 limit/base >10000 >2500 >640 >160 >40 >40 >10	152 18084 current 12 17 <1 current ▲ 41936 ▲ 1888 39 9 1 0	218 42157 history1 20 22 2 history1 ▲ 41360 ▲ 3278 88 20 1 1	157 23069 history2 14 10 3 history2      

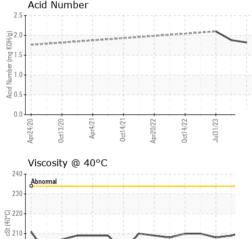
Submitted By: Wilberto Pacheco Garcia



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0ct14/21

C/ Pro

pr20/22

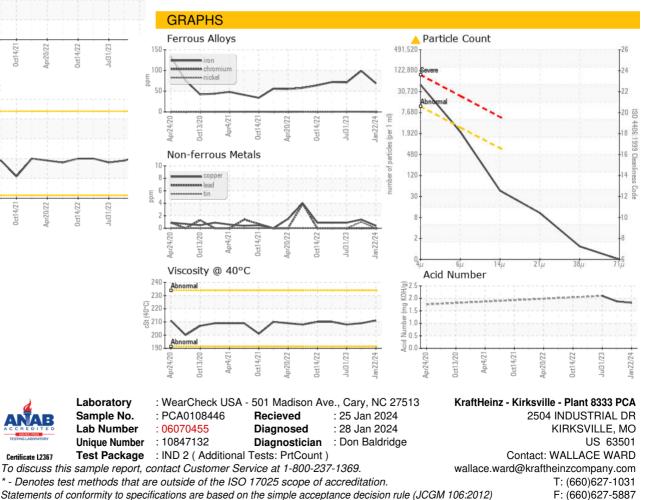
200

190

Apr24/20

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	🔺 MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		211	209	208
SAMPLE IMAG	iES	method	limit/base	current	history1	history2
Color				•		

Bottom



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

Certificate L2367

Submitted By: Wilberto Pacheco Garcia