

## **OIL ANALYSIS REPORT**

Area [10-1513027] EAST VANDEBERG 17C

Middle Gearbox

Fluid PETRO CANADA PURITY FG EP GEAR OIL 220 (--- 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. The amount and size of particulates present in the system are acceptable.

### Fluid Condition

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

SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		USP0012455	USP239081	USP232013
Sample Date		Client Info		31 May 2024	30 Nov 2022	03 Jun 2022
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				NORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	<1	2	<1
Chromium	ppm	ASTM D5185m	>15	0	0	0
Nickel	ppm	ASTM D5185m	>15	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	0	0	0
Lead	ppm	ASTM D5185m	>100	<1	0	<1
Copper	ppm	ASTM D5185m	>200	<1	0	<1
Tin	ppm	ASTM D5185m	>25	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		0	<1	0
Calcium	ppm	ASTM D5185m		0	<1	0
Phosphorus	ppm	ASTM D5185m		581	635	568
Zinc	ppm	ASTM D5185m		3	6	1
Sulfur	ppm	ASTM D5185m		568	611	542
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	4	4	3
Sodium	ppm	ASTM D5185m		1	<1	0
Potassium	ppm	ASTM D5185m	>20	1	0	0
Water	%	ASTM D6304	>0.2	0.001	0.009	0.004
ppm Water	ppm	ASTM D6304	>2000	4	92.0	45.5
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	5087	7980	14874
Particles >6µm		ASTM D7647	>5000	1366	1839	3321
Particles >14µm		ASTM D7647	>640	29	57	138
Particles >21µm		ASTM D7647	>160	3	4	21
Particles >38µm		ASTM D7647	>40	0	0	2
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/18/12	20/18/13	21/19/14
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.51	0.68	0.74	0.66

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Sample Rating Trend

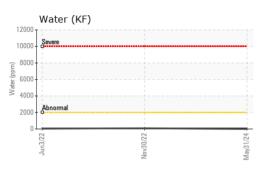


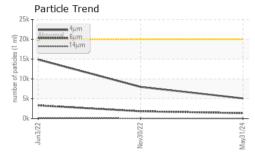
NORMAL

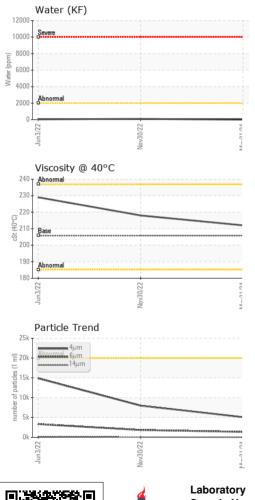
Contact/Location: KURT CONRADT - TYSWAV Page 1 of 2



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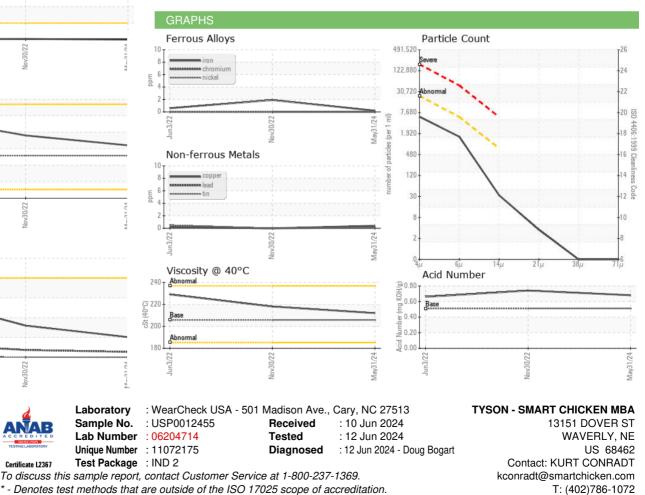








Bottom



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

Certificate 12367

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Contact/Location: KURT CONRADT - TYSWAV

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