

OIL ANALYSIS REPORT

UPS CANADA FORD 515414

Gasoline Engine

Fluid PETRO CANADA SUPREME 5W30 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Area

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



Sample Rating Trend

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0085528	PC0085564	
Sample Date		Client Info		29 May 2024	19 Dec 2023	
Machine Age	kms	Client Info		15528	3299	
Oil Age	kms	Client Info		0	0	
Oil Changed		Client Info		Not Changd	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>150	11	2	
Chromium	ppm	ASTM D5185(m)	>20	<1	0	
Nickel	ppm	ASTM D5185(m)	>5	<1	0	
Titanium	ppm	ASTM D5185(m)	>0	<1	0	
Silver		ASTM D5185(m)	>2	0	0	
Aluminum	ppm		>40	6	1	
	ppm	ASTM D5185(m)		0	0	
Lead	ppm	ASTM D5185(m)	>50	-	4	
Copper	ppm	ASTM D5185(m)	>155	11		
Tin	ppm	ASTM D5185(m)	>10	0	0	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	186	32	171	
Barium	ppm	ASTM D5185(m)	<1	<1	0	
Molybdenum	ppm	ASTM D5185(m)	79	75	70	
Manganese	ppm	ASTM D5185(m)	0	1	0	
Magnesium	ppm	ASTM D5185(m)	578	474	471	
Calcium	ppm	ASTM D5185(m)	1002	1189	1129	
Phosphorus	ppm	ASTM D5185(m)	745	619	595	
Zinc	ppm	ASTM D5185(m)	837	696	668	
Sulfur	ppm	ASTM D5185(m)	2502	2149	2268	
Lithium	ppm	ASTM D5185(m)		<1	<1	
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	37	21	
Sodium	ppm	ASTM D5185(m)	>400	6	2	
Potassium	ppm	ASTM D5185(m)	>20	3	1	
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	
Nitration	Abs/cm	ASTM D7624*	>20	13.9	4.5	
Sulfation	Abs/.1mm	ASTM D7415*	>30	26.5	14.5	



40 35

30

25 - 6 20-

10

Dec19/23

60 - _____ 55 - _____ 50 - _____

Dec1

10 - Abnormal

Dec19/23

85 T Abnormal

80 -75 -(0.0 70 - **Bass** 85 65 -

FT-IR (Direct Trend)

Oxidation Nitration

Sulfation

Viscosity @ 40°C

Viscosity @ 100°C

Viscosity @ 40°C

OIL ANALYSIS REPORT

	FLUID DEGRA	DATION	method	limit/base	current	history1	history
	Oxidation	Abs/.1mm	ASTM D7414*	>25	21.8	8.1	
and the second se	Base Number (BN)	mg KOH/g	ASTM D2896*	7.0	4.72	7.85	
	VISUAL		method	limit/base	current	history1	history
	White Metal	scalar	Visual*	NONE	NONE	NONE	
	Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
/24 -	Precipitate	scalar	Visual*	NONE	NONE	VLITE	
May29/24	Silt	scalar	Visual*	NONE	LIGHT	NONE	
_	Debris	scalar	Visual*	NONE	NONE	NONE	
	Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	
	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 PROPE	RTIES	method	limit/base	current	history1	history
	Visc @ 40°C	cSt	ASTM D7279(m)	69.33	56.0	59.5	
May29/24	Visc @ 100°C	cSt	ASTM D7279(m) ASTM D7279(m)		9.8	10.6	
May			ASTM D7279(III) ASTM D2270*	159	9.0 161	169	
	Viscosity Index (VI)	Scale	ASTIVI DZZTU	159	101	109	
	GRAPHS				Lood (nnm)		
	Iron (ppm)			200			
	_ 400 - Severe			150	Severe		
	200 - Abnormal			툞 100	Abnormal		
	0			50	- 0		******
				-	1/23		
5	Dec19/23			May29/24	Dec19/23		
10C	– Aluminum (ppm)			2	_ Chromium (p	nm)	
2	100 Severe			60			
	-			_ 40	Severe		
	E 50 - Abnormal			E 20	Abnormal		
				20			
				20			
	0/23-0			0	9/23		
	Dect 19/23			0	Dec19/23		
	er (ppm)			May29/24			
	er (ppm)			0 May29/24	Silicon (ppm)		
2	Copper (ppm)			0 Hav29/27	Silicon (ppm)		
	Copper (ppm)			0 Way 29/24	Silicon (ppm)		
ACC-14	Copper (ppm)			0 Hav29/27	Silicon (ppm)		
	Copper (ppm)			0 +72/62/vew 60 60 60 60 60 20 0	Silicon (ppm)		
a coc	Copper (ppm)			0 Way 29/24	Silicon (ppm)		
And CM	Copper (ppm)			May29/29/29	Silicon (ppm)		
	Copper (ppm)			0 Horo 0 Horo	Abnormal		
	Copper (ppm)			0 Horo 0 Horo	Abnormal		
account of the second se	Copper (ppm)			0 Horo 0 Horo	Abnormal		
a coc-M	Copper (ppm)			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Silicon (ppm)		
	Copper (ppm)			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Silicon (ppm)		
And CAd	Copper (ppm)			0 May29/24	Abnormal		
	Copper (ppm) 300 Server Abnomal 00 Viscosity @ 100°C 100 100 100 100 100 100 100 10			0 60 60 60 60 60 60 60 60 60 6	Silicon (ppm)		
Laboratory Sample No	Copper (ppm) 300 Severe 4bnormal 0 0 0 0 0 0 0 0 0 0 0 0 0	5 Appleby		60 60 60 60 60 60 60 60 60 60	Silicon (ppm)		Behshad Sal
Sample No.	Copper (ppm) 300 200 Abnomal 0 0 0 0 0 0 0 0 0 0 0 0 0		ved : 19	0 60 60 60 60 60 60 60 60 60 6	Silicon (ppm)	anada Technical/	
Sample No.	Copper (ppm) 300 200 Abnomal Viscosity @ 100°C 300 200 Abnomal 0 100 100 100 100 100 100 100	5 Appleby Recei	ved : 19 d : 20	60 60 60 60 60 60 60 60 60 60	Silicon (ppm)	anada Technical/	Behshad Sal

Report Id: PCA_129713 [WCAMIS] 02642845 (Generated: 06/20/2024 10:40:34) Rev: 1

Validity of results and interpretation are based on the sample and information as supplied.

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