

## **OIL ANALYSIS REPORT**

Sulfation

Area **UPS CANADA** FORD 515579

**Gasoline Engine** 

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

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

)			Dec2023	May2024		
,						
SAMPLE INFOR	MATION	method				history2
Sample Number		Client Info		PC0085516	PC0085565	
Sample Date		Client Info		29 May 2024	19 Dec 2023	
Machine Age	kms	Client Info		150798	3072	
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	8	2	
Chromium	ppm	ASTM D5185(m)	>20	<1	0	
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	
Titanium	ppm	ASTM D5185(m)	20	<1	0	
Silver	ppm	ASTM D5185(m)	>2	0	0	
Aluminum	ppm	ASTM D5185(m)	>40	4	1	
Lead	ppm	ASTM D5185(m)	>50	0	0	
Copper	ppm	ASTM D5185(m)	>155	4	3	
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	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	186	10	170	
Barium	ppm	ASTM D5185(m)	<1	<1	0	
Molybdenum	ppm	ASTM D5185(m)	79	60	70	
Manganese	ppm	ASTM D5185(m)	0	<1	0	
Magnesium	ppm	ASTM D5185(m)	578	792	467	
Calcium	ppm	ASTM D5185(m)	1002	1011	1118	
Phosphorus	ppm	ASTM D5185(m)	745	809	590	
Zinc	ppm	ASTM D5185(m)	837	1000	663	
Sulfur	ppm	ASTM D5185(m)	2502	2235	2248	
Lithium	ppm	ASTM D5185(m)		<1	<1	
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	17	23	
Sodium	ppm	ASTM D5185(m)	>400	5	2	
Potassium	ppm	ASTM D5185(m)	>20	2	1	
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	
Nitration	Abs/cm	ASTM D7624*	>20	12.0	4.5	
0 14 11		107110711				

Abs/.1mm ASTM D7415\* >30

14.5

24.2

Sample Rating Trend

NORMAL

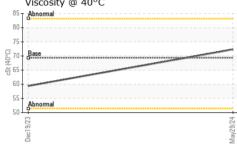


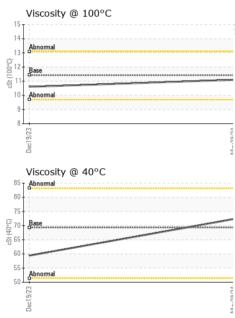
FT-IR (Direct Trend)

# **OIL ANALYSIS REPORT**

	FLUID DEGRA	DATION	method	limit/base	current	history1	histor
	Oxidation	Abs/.1mm	ASTM D7414*	>25	21.4	8.1	
	Base Number (BN)	mg KOH/g	ASTM D2896*	7.0	6.89	7.95	
	VISUAL		method	limit/base	current	history1	histor
ARRENT OF	White Metal	scalar	Visual*	NONE	NONE	NONE	
	Yellow Metal	scalar	Visual*	NONE	VLITE	NONE	
May29/24 -	Precipitate	scalar	Visual*	NONE	NONE	NONE	
May2	Silt	scalar	Visual*	NONE	NONE	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	NEG	
	Free Water	scalar	Visual*		NEG	NEG	
	FLUID PROPE	RTIES	method	limit/base	current	history1	histor
9/24	Visc @ 40°C	cSt	ASTM D7279(m)	69.33	72.3	59.4	
May29/24	Visc @ 100°C	cSt	ASTM D7279(m)	11.42	11.1	10.6	
	Viscosity Index (VI)	Scale	ASTM D2270*	159	144	170	
	GRAPHS						
	Iron (ppm)			20	Lead (ppm)		
	600 Severe			20	Severe		
	E.			ត្ត 10			
	200 - Abnormal				50 - Abnormal		
				24	0 L		
5	Dec19/23			May29/24	Dec19/23		
0.00-	 Aluminum (ppm)			N.	□ Chromium (p	(mm)	
N.A.	<sup>100</sup> Severe					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	-			-	10 - Severe		
	E 50 - Abnormal			udd .	Abnormal		
	0				0		
	Dec19/23			May29/24	Dec19/23		
	Dec			May	Deci		
	Copper (ppm)			,	Silicon (ppm)	)	
	300 Severe				SO Severe		
V Cr D	E 200 Abnormal			ud d			
A	100-				20 -		
	0 1			24			
	Dec19/			May29/24	Dec19/23		
	لان Viscosity @ 100°0	2			Base Numbe	r	
	16 T			8ase Number (mg KOH/g) b 8 8 0 8 1 4	.0 Base		
	0.14 0.12 12 8 8 10 Abnormal 5 10 Abnormal			B B B	.0		
	은 12 - Base 쟝 10 - Abnormal	******		aquin 2	.0		
	8				.0		
	Dec19/23			May29/24	Dec19/23		
	Dec			May	Dec		
atory	: WearCheck - C8-117 : PC0085516	5 Appleby <b>Recei</b>		gton, ON L7 ) Jun 2024	'L 5H9 Petro-C	Canada Technical	Behshad {
		Recel	iveu 19				
e No.	: 02642849	Teste		Jun 2024		M	ississauga

35 Oxidation 30 Vitration 25 Sulfatio 20% 4ps/cm 10 E, 0 Dec19/23 Viscosity @ 40°C





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CALA

ISO 17025:2017 Accredited Laboratory

To discuss th

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.