

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id SPC2 Component Front Differential Fluid PETRO CANADA GEARLUBE TOS 80W90 (--- GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

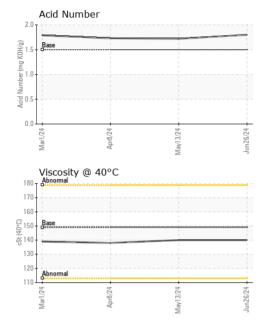
#### Fluid Condition

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

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0123733	PCA0123801	PCA0118444
Sample Date		Client Info		26 Jun 2024	13 May 2024	08 Apr 2024
Machine Age	hrs	Client Info		10450	9562	8864
Oil Age	hrs	Client Info		500	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>.2	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	14	8	23
Chromium	ppm	ASTM D5185m	>10	0	<1	0
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>25	0	1	<1
Lead	ppm	ASTM D5185m	>25	0	<1	0
Copper	ppm	ASTM D5185m	>100	0	<1	<1
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	274	267	329	309
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.0	0	0	0
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	5.5	<1	1	<1
Calcium	ppm	ASTM D5185m	9.9	5	<1	6
Phosphorus	ppm	ASTM D5185m	855	1070	1086	1052
Zinc	ppm	ASTM D5185m	10	0	0	0
Sulfur	ppm	ASTM D5185m	14849	23267	21591	23533
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	8	8	4
Sodium	ppm	ASTM D5185m		3	0	2
Potassium	ppm	ASTM D5185m	>20	<1	1	2
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.5	1.80	1.72	1.73



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White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water Free Water Visc @ 40°C SAMPLE IMAC	scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual ASTM D445	NONE NONE NONE NONE NONE NORML NORML >.2	NONE NONE NONE NONE NORML NORML NEG NEG	NONE NONE NONE NONE NONE NORML NORML NEG NEG	NONE MODER NONE LIGHT NONE NORML NORML NEG NEG
Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water Free Water Visc @ 40°C	scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual <b>method</b>	NONE NONE NONE NORML NORML >.2	NONE NONE NONE NORML NORML NEG NEG	NONE NONE NONE NORML NORML NEG NEG	NONE NONE LIGHT NONE NORML NORML NEG
Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water Free Water FLUID PROPE Visc @ 40°C	scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual method	NONE NONE NORML NORML >.2	NONE NONE NORML NORML NEG NEG	NONE NONE NORML NORML NEG NEG	NONE LIGHT NONE NORML NORML NEG
Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPE Visc @ 40°C	scalar scalar scalar scalar scalar scalar RTIES	*Visual *Visual *Visual *Visual *Visual *Visual method	NONE NORML NORML >.2	NONE NORE NORML NORML NEG NEG	NONE NORML NORML NEG NEG	LIGHT NONE NORML NORML NEG
Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPE Visc @ 40°C	scalar scalar scalar scalar scalar RTIES	*Visual *Visual *Visual *Visual *Visual method	NONE NORML >.2	NONE NORML NORML NEG NEG	NONE NORML NORML NEG NEG	NONE NORML NORML NEG
Appearance Odor Emulsified Water Free Water FLUID PROPE Visc @ 40°C	scalar scalar scalar scalar RTIES	*Visual *Visual *Visual *Visual method	NORML NORML >.2	NORML NORML NEG NEG	NORML NORML NEG NEG	NORML NORML NEG
Odor Emulsified Water Free Water FLUID PROPE Visc @ 40°C	scalar scalar scalar scalar RTIES	*Visual *Visual *Visual method	NORML NORML >.2	NORML NEG NEG	NORML NORML NEG NEG	NORML NORML NEG
Odor Emulsified Water Free Water FLUID PROPE Visc @ 40°C	scalar scalar scalar RTIES	*Visual *Visual method	>.2	NEG NEG	NEG NEG	NEG
Emulsified Water Free Water FLUID PROPE Visc @ 40°C	scalar scalar RTIES	*Visual *Visual method	>.2	NEG NEG	NEG NEG	NEG
Free Water FLUID PROPE Visc @ 40°C	scalar RTIES	*Visual method		NEG	NEG	
Visc @ 40°C	RTIES		limit/base	current		
Visc @ 40°C		ASTM D445				history2
SAMPLE IMAG			149	140	140	138
	iES	method	limit/base	current	history1	history2
Color				no image	no image	no image
Bottom				no image	no image	no image
GRAPHS Iron (ppm)				Lead (ppm)		
2000			150			
1000		1	E <sup>100</sup>	Severe		
Abnormal			50	Abnormal		
ar1/24		/13/24		ar1/24 +	pr8/24 +	-
—		Mar	Jur		Z	-
150 T			30-	Severe		
100 - 0			E 20	Abnormal		
<sup>50</sup> Abnormal				0		
24		/24		124	24 -	2
Mar1, Apr8,		lay13,	un26,	Marl	Apr8. lav13,	
Copper (ppm)		2	7			
300 Severe			300-			
200 - C			E 200			
			-100	- Abhonnai		
flar1/24 -		y13/24	n26/24	Aar1/24	Apr8/24 .	
		Ma		≥ Acid Number	≥	
Viscosity @ 10°C			3/H	Acia Marinner		
Viscosity @ 40°C			Q 2.0	0		
200 T Aba a mat			<u>9</u> 2.0	Base		
Abnormal 150 Base			2.0 س الله الله الله الله الله الله الله ال	Base		
200 T Aba a mat		May13/24 +	Jun 26/24	Harl/24	Apr6/24 +	
10	GRAPHS Iron (ppm)	GRAPHS Iron (ppm) Abnomal Abnomal Abnomal Abnomal Copper (ppm) Copper (ppm)	GRAPHS Iron (ppm) Abnomal Aluminum (ppm) Aluminum (ppm) Copper (ppm) Copper (ppm) Copper (ppm)	Aluminum (ppm)     300       100     4000	GRAPHS   Iron (ppm) Lead (ppm)   000 Anomal   000 Formal   000 <th>GRAPHS Iron (ppm)</th>	GRAPHS Iron (ppm)

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Submitted By: TIM RANDOLPH Page 2 of 2