

OIL ANALYSIS REPORT

Sample Rating Trend





Component Rear Differential

Fluid

PETRO CANADA PRODURO TO-4 SAE 50 (--- 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.

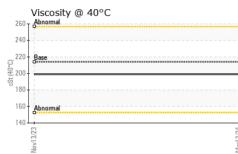
Fluid Condition

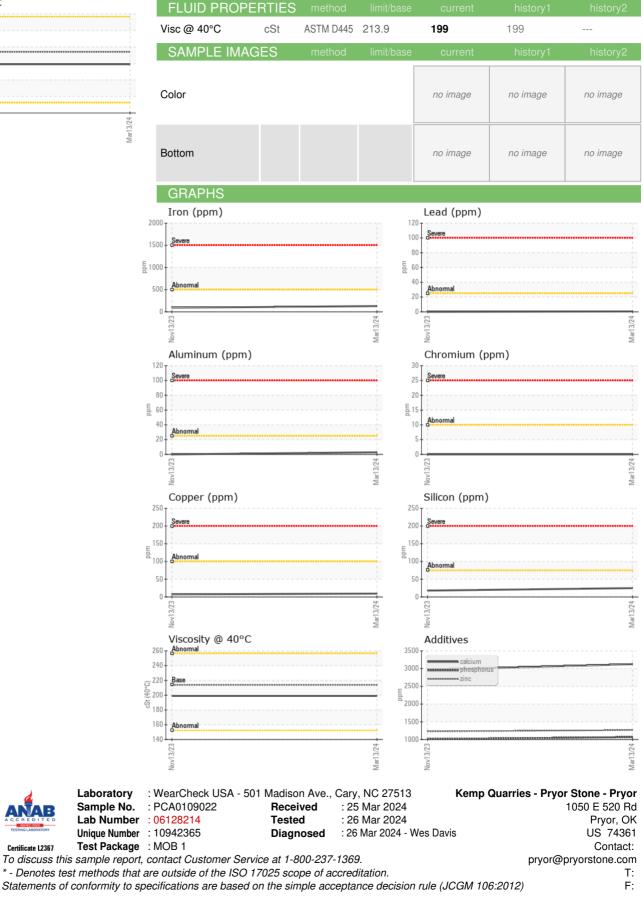
The condition of the oil is acceptable for the time in service.

SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0109022	PCA0084358	
Sample Date		Client Info		13 Mar 2024	13 Nov 2023	
Machine Age	hrs	Client Info		31295	31285	
Oil Age	hrs	Client Info		2000	31285	
Oil Changed		Client Info		Changed	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINA		method	limit/base	current	history1	history2
Water		WC Method		NEG	NEG	
WEAR METAI	_S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	130	91	
Chromium	ppm	ASTM D5185m	>10	0	0	
Nickel	ppm	ASTM D5185m	>10	<1	0	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m		0	0	
Aluminum	ppm	ASTM D5185m	>25	3	0	
Lead	ppm	ASTM D5185m	>25	۲ <1	0	
Copper	ppm	ASTM D5185m	>100	10	7	
Tin	ppm	ASTM D5185m	>100	<1	0	
Vanadium	ppm	ASTM D5185m	210	0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES	ppm		limit/base		history1	history2
		method		current		
Boron	ppm	ASTM D5185m	2	8	7	
Barium	ppm	ASTM D5185m	0	0	0	
Molybdenum	ppm	ASTM D5185m	0	3	1	
0	ppm		0	1	0	
Magnesium	ppm	ASTM D5185m	9	37	33	
Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m	9 3114	37 3124	33 2970	
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	9 3114 1099	37 3124 1067	33 2970 1011	
Magnesium Calcium Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	9 3114	37 3124 1067 1265	33 2970 1011 1226	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	9 3114 1099	37 3124 1067	33 2970 1011	
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	9 3114 1099 1245	37 3124 1067 1265	33 2970 1011 1226	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAI Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	9 3114 1099 1245 7086 <i>limit/base</i> >75	37 3124 1067 1265 8232 current 25	33 2970 1011 1226 6722	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAI Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	9 3114 1099 1245 7086 <i>limit/base</i> >75	37 3124 1067 1265 8232 current	33 2970 1011 1226 6722 history1	
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm VTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	9 3114 1099 1245 7086 limit/base >75	37 3124 1067 1265 8232 current 25	33 2970 1011 1226 6722 history1 18	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm VTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	9 3114 1099 1245 7086 limit/base >75	37 3124 1067 1265 8232 current 25 3	33 2970 1011 1226 6722 history1 18 2	 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm VTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	9 3114 1099 1245 7086 limit/base >75 >20	37 3124 1067 1265 8232 current 25 3 2	33 2970 1011 1226 6722 history1 18 2 0	 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAI Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm VTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	9 3114 1099 1245 7086 limit/base >75 >20 limit/base	37 3124 1067 1265 8232 current 25 3 2 2 current MODER NONE	33 2970 1011 1226 6722 history1 18 2 0 history1	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAI Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm vTS ppm ppm ppm scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	9 3114 1099 1245 7086 limit/base >75 >20 limit/base NONE	37 3124 1067 1265 8232 current 25 3 2 2 current MODER	33 2970 1011 1226 6722 history1 18 2 0 history1 NONE	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm ppm ppm vTS ppm ppm ppm scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *Visual	9 3114 1099 1245 7086 imit/base >75 >20 imit/base NONE NONE	37 3124 1067 1265 8232 current 25 3 2 2 current MODER NONE	33 2970 1011 1226 6722 history1 18 2 0 history1 NONE NONE	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm ppm ppm vTS ppm ppm ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual	9 3114 1099 1245 7086 imit/base >75 >20 imit/base NONE NONE NONE NONE	37 3124 1067 1265 8232 current 25 3 2 2 current MODER NONE NONE	33 2970 1011 1226 6722 history1 18 2 0 history1 NONE NONE NONE NONE	 history2 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual	9 3114 1099 1245 7086 imit/base >75 >20 imit/base NONE NONE NONE NONE	37 3124 1067 1265 8232 current 25 3 2 2 current MODER NONE NONE NONE	33 2970 1011 1226 6722 history1 18 2 0 history1 NONE NONE NONE NONE NONE	 history2 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual	9 3114 1099 1245 7086 imit/base >75 20 imit/base NONE NONE NONE NONE NONE NONE NONE	37 3124 1067 1265 8232 <u>current</u> 25 3 2 2 <u>current</u> MODER NONE NONE NONE NONE	33 2970 1011 1226 6722 history1 18 2 0 history1 NONE NONE NONE NONE NONE NONE NONE	 history2 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual	9 3114 1099 1245 7086 Imit/base >75 20 Imit/base NONE NONE NONE NONE NONE NONE NONE NON	37 3124 1067 1265 8232 current 25 3 2 2 current MODER NONE NONE NONE NONE NONE	33 2970 1011 1226 6722 history1 18 2 0 history1 NONE NONE NONE NONE NONE NONE NONE	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAI Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	ppm ppm ppm ppm ppm ppm vTS ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	9 3114 1099 1245 7086 Imit/base >75 >20 Imit/base >20 Imit/base NONE NONE NONE NONE NONE NONE NONE NON	37 3124 1067 1265 8232 current 25 3 2 2 current MODER NONE NONE NONE NONE NONE NONE NONE	33 2970 1011 1226 6722 history1 18 2 0 history1 NONE NONE NONE NONE NONE NONE NONE NON	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	9 3114 1099 1245 7086 Imit/base >75 20 Imit/base NONE NONE NONE NONE NONE NONE NONE NON	37 3124 1067 1265 8232 current 25 3 2 2 current MODER NONE NONE NONE NONE NONE NONE NORML NORML	33 2970 1011 1226 6722 history1 18 2 0 history1 NONE NONE NONE NONE NONE NONE NONE NON	 history2 history2 history2



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