

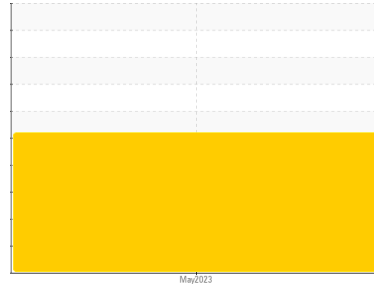
PROBLEM SUMMARY

Sample Rating Trend

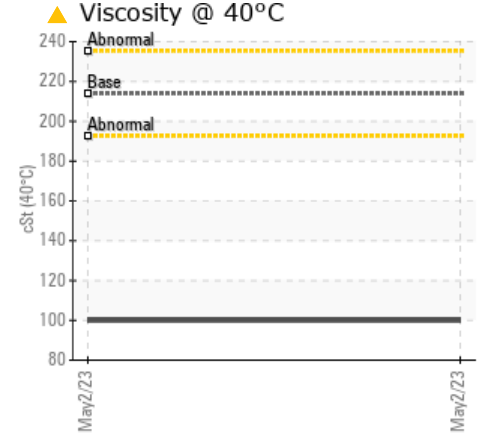
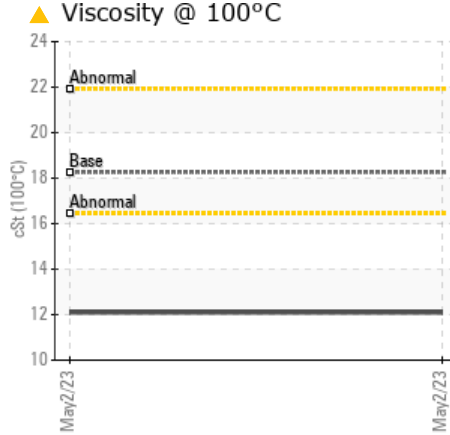
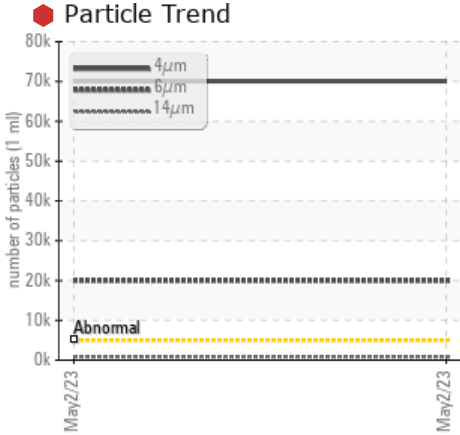
ISO



Machine Id
Produro T04 + 50 (After line push and delivery Last)
Component
New (Unused) Oil
Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)



COMPONENT CONDITION SUMMARY



RECOMMENDATION

This is the baseline readout on this new (unused) oil. The fluid is suitable for service. Confirm the source of the lubricant being utilized for top-up/fill. Resample in 30-45 days to monitor this situation. NOTE: New oils are not generally filtered or guaranteed to a certain cleanliness code. We advise that you verify the target cleanliness code for your application and recommend the use of a portable filter cart to fill any system with a target code below the ISO cleanliness code of this product.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	---	---
Particles >4µm	ASTM D7647	>5000	70061	---	---	---
Particles >6µm	ASTM D7647	>1300	19978	---	---	---
Particles >14µm	ASTM D7647	>160	816	---	---	---
Particles >21µm	ASTM D7647	>40	69	---	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	23/21/17	---	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	213.9	99.9	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	18.26	12.1	---	---

Customer Id: PCA_165033
Sample No.: PC0078671
Lab Number: 02555030
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
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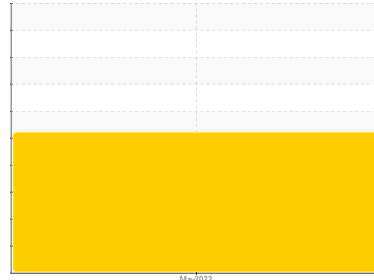
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Alert	---	---	?	NOTE: New oils are not generally filtered or guaranteed to a certain cleanliness code. We advise that you verify the target cleanliness code for your application and recommend the use of a portable filter cart to fill any system with a target code below the ISO cleanliness code of this product.
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.

HISTORICAL DIAGNOSIS



Machine Id
Produro T04 + 50 (After line push and delivery Last)
Component
New (Unused) Oil
Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)



DIAGNOSIS

Recommendation

This is the baseline readout on this new (unused) oil. The fluid is suitable for service. Confirm the source of the lubricant being utilized for top-up/fill. Resample in 30-45 days to monitor this situation. NOTE: New oils are not generally filtered or guaranteed to a certain cleanliness code. We advise that you verify the target cleanliness code for your application and recommend the use of a portable filter cart to fill any system with a target code below the ISO cleanliness code of this product.

Wear

(not applicable)

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid. The condition of the oil is suitable for service. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PC0078671	---	---
Sample Date	Client Info	02 May 2023	---	---
Machine Age	hrs	0	---	---
Oil Age	hrs	0	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		SEVERE	---	---

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >5	2	---	---
Chromium	ppm	ASTM D5185(m) >5	0	---	---
Nickel	ppm	ASTM D5185(m) >5	0	---	---
Titanium	ppm	ASTM D5185(m)	<1	---	---
Silver	ppm	ASTM D5185(m) >5	0	---	---
Aluminum	ppm	ASTM D5185(m) >5	1	---	---
Lead	ppm	ASTM D5185(m) >5	0	---	---
Copper	ppm	ASTM D5185(m) >5	0	---	---
Tin	ppm	ASTM D5185(m) >5	0	---	---
Antimony	ppm	ASTM D5185(m)	0	---	---
Vanadium	ppm	ASTM D5185(m)	0	---	---
Beryllium	ppm	ASTM D5185(m)	0	---	---
Cadmium	ppm	ASTM D5185(m)	0	---	---

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m) 2	9	---	---
Barium	ppm	ASTM D5185(m) 0	0	---	---
Molybdenum	ppm	ASTM D5185(m) 0	6	---	---
Manganese	ppm	ASTM D5185(m) 0	<1	---	---
Magnesium	ppm	ASTM D5185(m) 9	93	---	---
Calcium	ppm	ASTM D5185(m) 3114	3200	---	---
Phosphorus	ppm	ASTM D5185(m) 1099	950	---	---
Zinc	ppm	ASTM D5185(m) 1245	1100	---	---
Sulfur	ppm	ASTM D5185(m) 7086	3360	---	---
Lithium	ppm	ASTM D5185(m)	<1	---	---

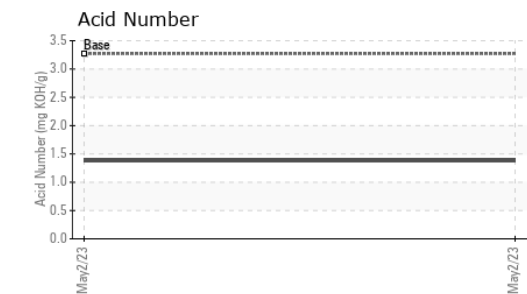
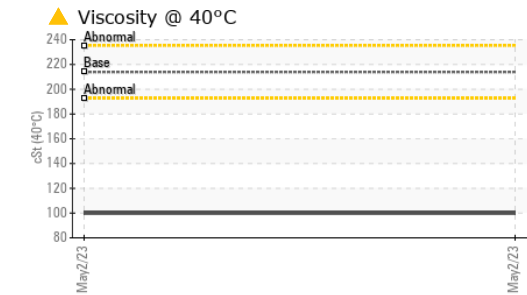
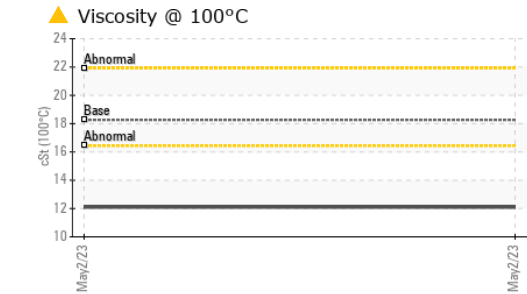
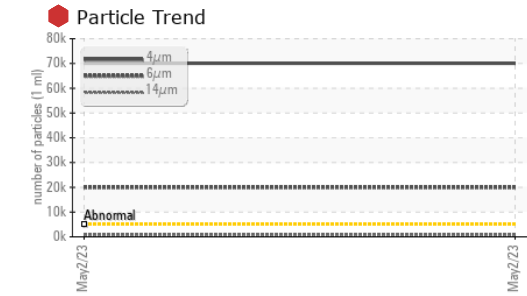
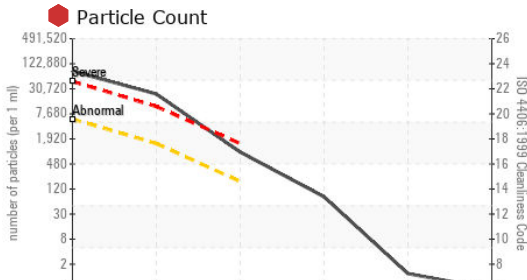
CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >15	15	---	---
Sodium	ppm	ASTM D5185(m)	1	---	---
Potassium	ppm	ASTM D5185(m) >20	<1	---	---

INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	0	---	---
Nitration	Abs/cm	ASTM D7624*	3.3	---	---
Sulfation	Abs/.1mm	ASTM D7415*	14.2	---	---

OIL ANALYSIS REPORT



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	70061	---	---	
Particles >6µm	ASTM D7647	>1300	19978	---	---	
Particles >14µm	ASTM D7647	>160	816	---	---	
Particles >21µm	ASTM D7647	>40	69	---	---	
Particles >38µm	ASTM D7647	>10	1	---	---	
Particles >71µm	ASTM D7647	>3	0	---	---	
Oil Cleanliness	ISO 4406 (c)	>19/17/14	23/21/17	---	---	

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*		5.9	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	3.27	1.38	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	8.60	9.13	---	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*		NEG	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	213.9	99.9	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	18.26	12.1	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	96	112	---	---

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color					no image	no image
Bottom					no image	no image



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Petro-Canada Technical/Yen Garcia**
Sample No. : PC0078671 **Received** : 03 May 2023
Lab Number : 02555030 **Diagnosed** : 05 May 2023
Unique Number : 5568045 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: FT-IR, ICP-NewOil, KV100, PrtCount, TBN, VI)

To discuss this sample report, contact Customer Service at 1-800-268-2131.

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.

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