



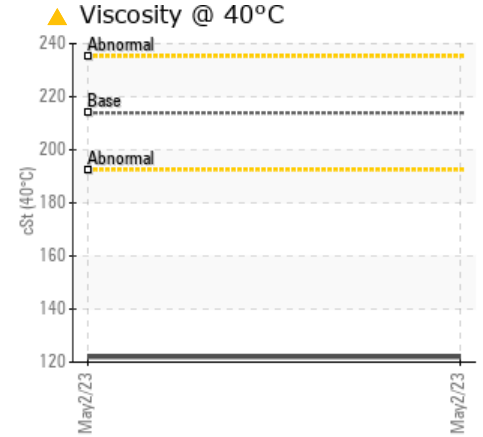
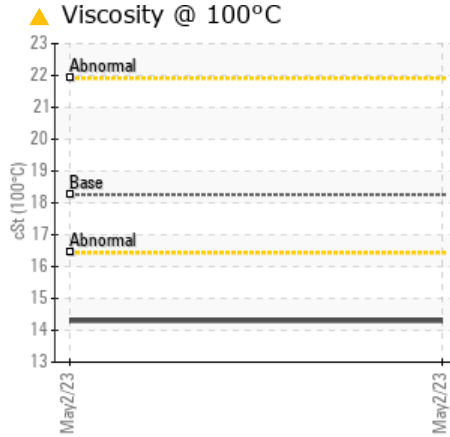
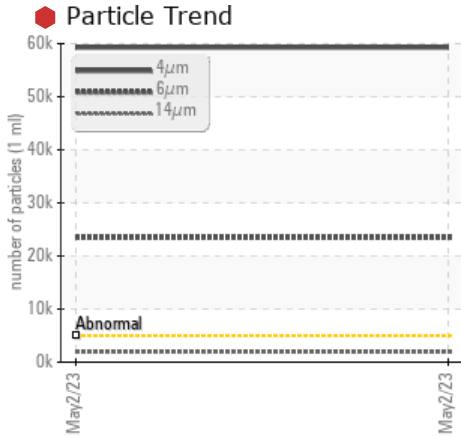
Machine Id
Produro TO-4 + 50 (80 Lt line push)

Component
3 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	59289	---	---	---
Particles >6µm	ASTM D7647	>1300	23468	---	---	---
Particles >14µm	ASTM D7647	>160	1893	---	---	---
Particles >21µm	ASTM D7647	>40	133	---	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	23/22/18	---	---	---
Visc @ 40°C	cSt ASTM D7279(m)	213.9	122	---	---	---
Visc @ 100°C	cSt ASTM D7279(m)	18.26	14.3	---	---	---
Viscosity Index (VI)	Scale ASTM D2270*	96	117	---	---	---

Customer Id: PCA_165033

Sample No.: PC0078672

Lab Number: 02555026

Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
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Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

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 TO-4 + 50 (80 Lt line push)

Component
3 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 particulates (2 to 100 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 15W40 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	PC0078672	---	---
Sample Date	Client Info	02 May 2023	---	---
Machine Age	hrs Client Info	0	---	---
Oil Age	hrs Client Info	0	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		SEVERE	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185(m)	>5	1	---	---
Chromium ppm ASTM D5185(m)	>5	0	---	---
Nickel ppm ASTM D5185(m)	>5	<1	---	---
Titanium ppm ASTM D5185(m)		0	---	---
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)		<1	---	---
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	20	---	---
Barium ppm ASTM D5185(m)	0	0	---	---
Molybdenum ppm ASTM D5185(m)	0	24	---	---
Manganese ppm ASTM D5185(m)	0	<1	---	---
Magnesium ppm ASTM D5185(m)	9	370	---	---
Calcium ppm ASTM D5185(m)	3114	2210	---	---
Phosphorus ppm ASTM D5185(m)	1099	1000	---	---
Zinc ppm ASTM D5185(m)	1245	1120	---	---
Sulfur ppm ASTM D5185(m)	7086	3740	---	---
Lithium ppm ASTM D5185(m)		<1	---	---

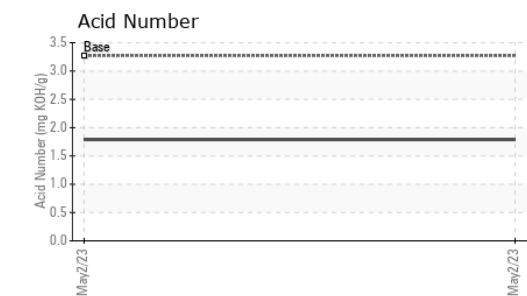
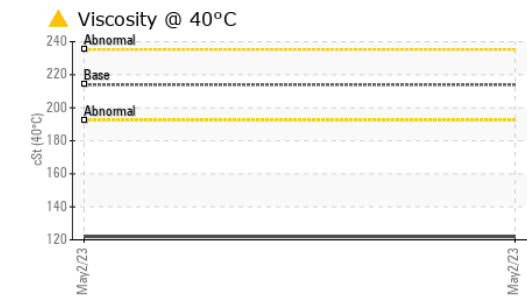
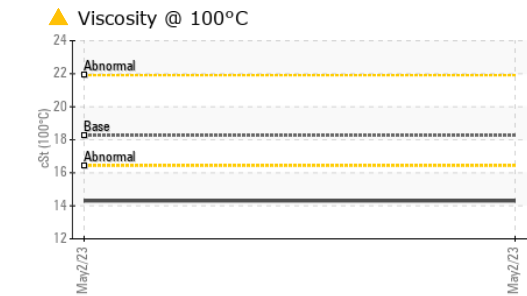
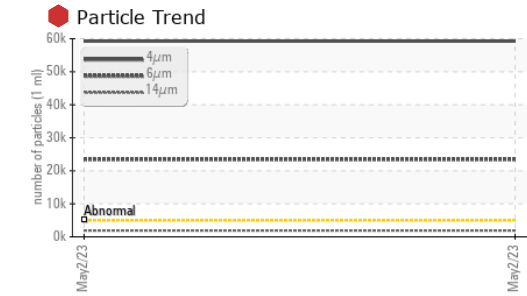
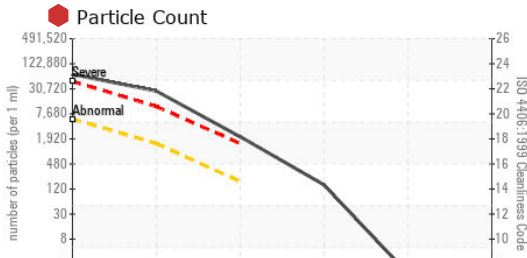
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm ASTM D5185(m)	>15	13	---	---
Sodium ppm ASTM D5185(m)		1	---	---
Potassium ppm ASTM D5185(m)	>20	0	---	---

INFRA-RED

method	limit/base	current	history1	history2
Soot % ASTM D7844*		0	---	---
Nitration Abs/cm ASTM D7624*		3.7	---	---
Sulfation Abs/.1mm ASTM D7415*		16.7	---	---

OIL ANALYSIS REPORT



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	59289	---	---	
Particles >6µm	ASTM D7647	>1300	23468	---	---	
Particles >14µm	ASTM D7647	>160	1893	---	---	
Particles >21µm	ASTM D7647	>40	133	---	---	
Particles >38µm	ASTM D7647	>10	1	---	---	
Particles >71µm	ASTM D7647	>3	0	---	---	
Oil Cleanliness	ISO 4406 (c)	>19/17/14	23/22/18	---	---	

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	6.9	---	---	
Acid Number (AN)	mg KOH/g	ASTM D974*	3.27	1.79	---	
Base Number (BN)	mg KOH/g	ASTM D2896*	8.60	8.43	---	

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	122	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	18.26	14.3	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	96	117	---	---

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



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Petro-Canada Technical/Yen Garcia**
Sample No. : PC0078672 **Received** : 03 May 2023
Lab Number : 02555026 **Diagnosed** : 05 May 2023
Unique Number : 5568041 **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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