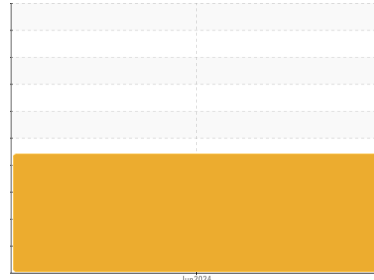


PROBLEM SUMMARY

Sample Rating Trend



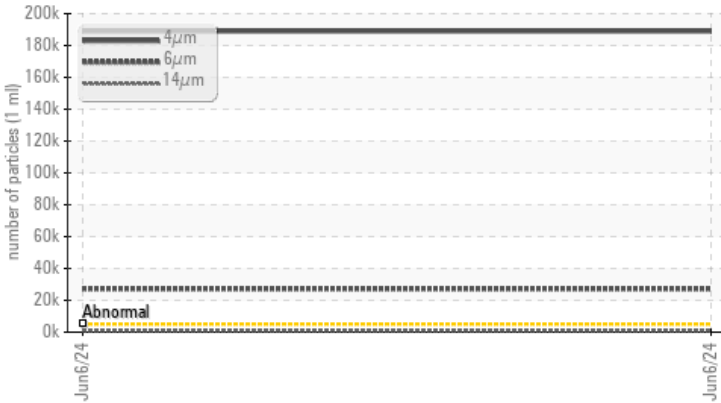
ISO



Machine Id
HRM #2
Component
Lube System
Fluid
PETRO CANADA ENDURATEX EP 460 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	---	---
Particles >4µm	ASTM D7647	>5000	▲ 188962	---	---
Particles >6µm	ASTM D7647	>1300	▲ 27200	---	---
Particles >14µm	ASTM D7647	>160	▲ 990	---	---
Particles >21µm	ASTM D7647	>40	▲ 271	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 25/22/17	---	---

Customer Id: PCA_164787
Sample No.: PC0070428
Lab Number: 02640869
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Dirt Access	---	---	?	We advise that you check all areas where contaminants can enter the system.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS



Machine Id

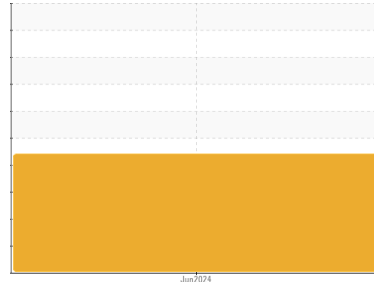
HRM #2

Component

Lube System

Fluid

PETRO CANADA ENDURATEX EP 460 (--- GAL)



DIAGNOSIS

▲ Recommendation

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. 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	PC0070428	---	---
Sample Date	Client Info	06 Jun 2024	---	---
Machine Age	days	Client Info	14	---
Oil Age	days	Client Info	0	---
Oil Changed	Client Info	N/A	---	---
Sample Status		SEVERE	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method	>0.05	NEG	---

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	<1	---
Chromium	ppm	ASTM D5185(m)	>20	0	---
Nickel	ppm	ASTM D5185(m)	>20	0	---
Titanium	ppm	ASTM D5185(m)		0	---
Silver	ppm	ASTM D5185(m)		0	---
Aluminum	ppm	ASTM D5185(m)	>20	0	---
Lead	ppm	ASTM D5185(m)	>20	0	---
Copper	ppm	ASTM D5185(m)	>20	<1	---
Tin	ppm	ASTM D5185(m)	>20	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)	55	15	---
Barium	ppm	ASTM D5185(m)	0	0	---
Molybdenum	ppm	ASTM D5185(m)	0	0	---
Manganese	ppm	ASTM D5185(m)	0	0	---
Magnesium	ppm	ASTM D5185(m)	2	1	---
Calcium	ppm	ASTM D5185(m)	6	3	---
Phosphorus	ppm	ASTM D5185(m)	240	160	---
Zinc	ppm	ASTM D5185(m)	3	5	---
Sulfur	ppm	ASTM D5185(m)	10310	6552	---
Lithium	ppm	ASTM D5185(m)		<1	---

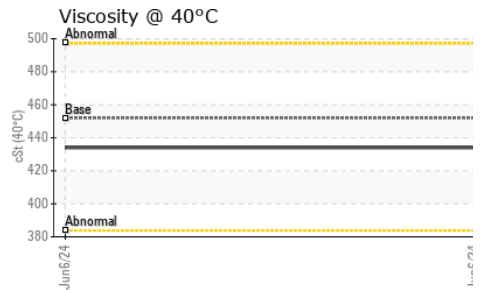
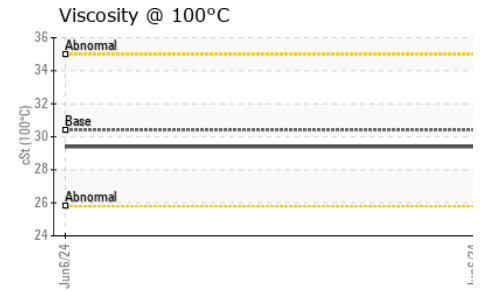
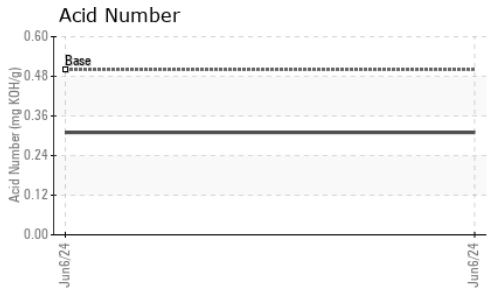
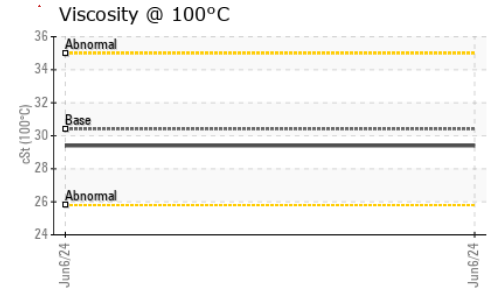
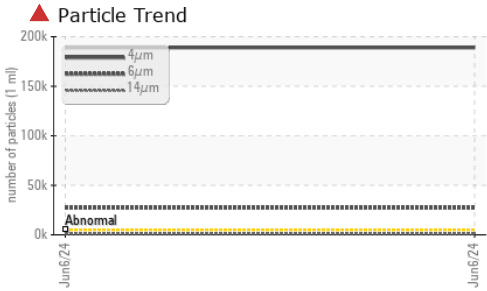
CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	3	---
Sodium	ppm	ASTM D5185(m)		0	---
Potassium	ppm	ASTM D5185(m)	>20	<1	---

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 188962	---
Particles >6µm	ASTM D7647	>1300	▲ 27200	---
Particles >14µm	ASTM D7647	>160	▲ 990	---
Particles >21µm	ASTM D7647	>40	▲ 271	---
Particles >38µm	ASTM D7647	>10	10	---
Particles >71µm	ASTM D7647	>3	2	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 25/22/17	---

OIL ANALYSIS REPORT



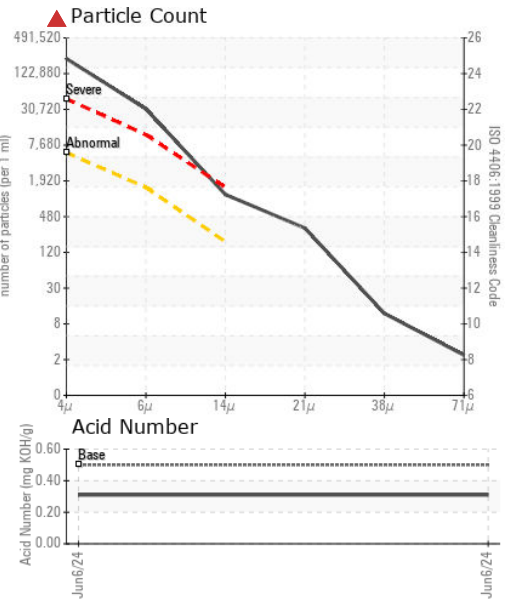
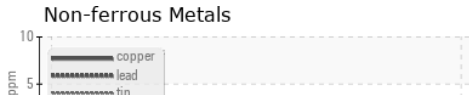
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.5	0.31	---	---

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*	>0.05	NEG	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	452	434	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	30.41	29.4	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	97	95	---	---

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

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Petro-Canada Technical/Luc LeBlanc**
Sample No. : PC0070428 **Received** : 10 Jun 2024
Lab Number : **02640869** **Tested** : 11 Jun 2024
Unique Number : 5798408 **Diagnosed** : 11 Jun 2024 - Wes Davis
Test Package : IND 2 (Additional Tests: KV100, 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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