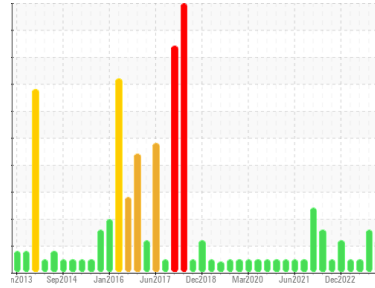




PROBLEM SUMMARY

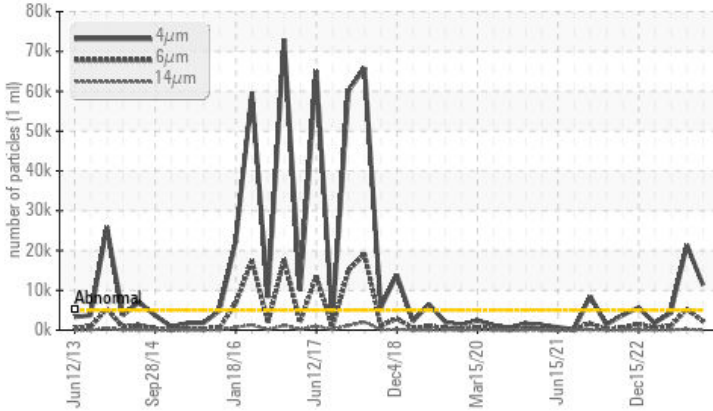
Area
2 Phoenix/020 ISO Dewax/P Pump/100 Feed Pump
 Machine Id
N/A 20P100 (East)
 Component
Pump
 Fluid
PETRO CANADA TURBOFLO 32 (136 LTR)

Sample Rating Trend



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ABNORMAL	NORMAL
Particles >4µm	ASTM D7647	>5000	▲ 11339	▲ 21359	4313
Particles >6µm	ASTM D7647	>1300	▲ 2218	▲ 5314	1025
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 21/18/13	▲ 22/20/15	19/17/13

Customer Id: PETMIS
 Sample No.: WC0883392
 Lab Number: 02603330
 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 recommend you service the filters on this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

30 Oct 2023 Diag: Wes Davis

ISO



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



15 Sep 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



15 Mar 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

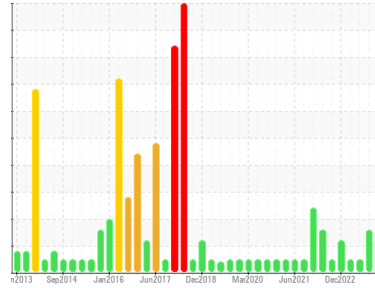
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
2 Phoenix/020 ISO Dewax/P Pump/100 Feed Pump
 Machine Id
N/A 20P100 (East)
 Component
Pump
 Fluid
PETRO CANADA TURBOFLO 32 (136 LTR)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 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	WC0883392	WC0822067	WC0851461
Sample Date	Client Info	15 Dec 2023	30 Oct 2023	15 Sep 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ABNORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >.1	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >90	0	0	0
Chromium	ppm ASTM D5185(m) >5	0	0	0
Nickel	ppm ASTM D5185(m) >5	0	0	0
Titanium	ppm ASTM D5185(m) >3	0	0	0
Silver	ppm ASTM D5185(m) >3	<1	0	<1
Aluminum	ppm ASTM D5185(m) >7	0	<1	0
Lead	ppm ASTM D5185(m) >12	0	0	0
Copper	ppm ASTM D5185(m) >30	<1	<1	<1
Tin	ppm ASTM D5185(m) >9	0	0	0
Antimony	ppm ASTM D5185(m)	0	0	0
Vanadium	ppm ASTM D5185(m)	0	0	0
Beryllium	ppm ASTM D5185(m)	0	0	0
Cadmium	ppm ASTM D5185(m)	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 0	<1	0	<1
Barium	ppm ASTM D5185(m) 0	<1	<1	<1
Molybdenum	ppm ASTM D5185(m) 0	0	0	0
Manganese	ppm ASTM D5185(m)	0	0	0
Magnesium	ppm ASTM D5185(m) 0	0	0	0
Calcium	ppm ASTM D5185(m) 0	<1	<1	<1
Phosphorus	ppm ASTM D5185(m) 120	4	6	6
Zinc	ppm ASTM D5185(m) 0.0	<1	<1	1
Sulfur	ppm ASTM D5185(m) 0	780	613	764
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

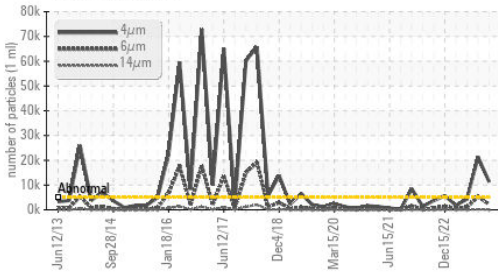
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >60	0	0	0
Sodium	ppm ASTM D5185(m)	0	0	<1
Potassium	ppm ASTM D5185(m) >20	0	0	0

FLUID CLEANLINESS

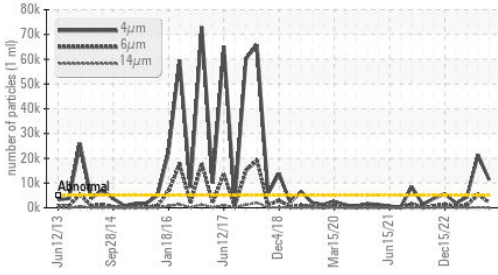
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	▲ 11339	▲ 21359	4313
Particles >6µm	ASTM D7647 >1300	▲ 2218	▲ 5314	1025
Particles >14µm	ASTM D7647 >160	50	▲ 221	70
Particles >21µm	ASTM D7647 >40	7	35	30
Particles >38µm	ASTM D7647 >10	0	1	4
Particles >71µm	ASTM D7647 >3	0	1	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 21/18/13	▲ 22/20/15	19/17/13

OIL ANALYSIS REPORT

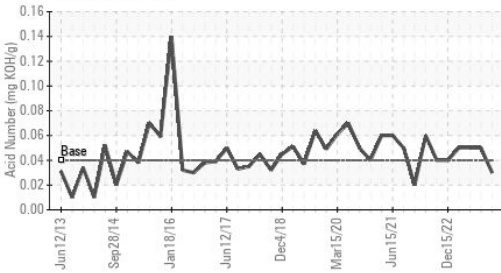
▲ Particle Trend



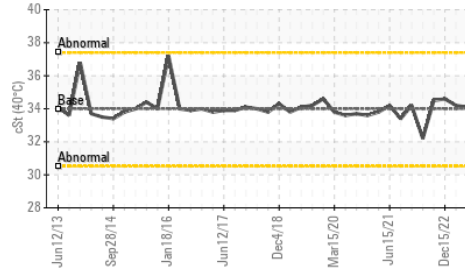
▲ Particle Trend



Acid Number



Viscosity @ 40°C



FLUID DEGRADATION	method	limit/base	current	history1	history2
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Acid Number (AN)	mg KOH/g	ASTM D974*	0.04	0.03	0.05	0.05
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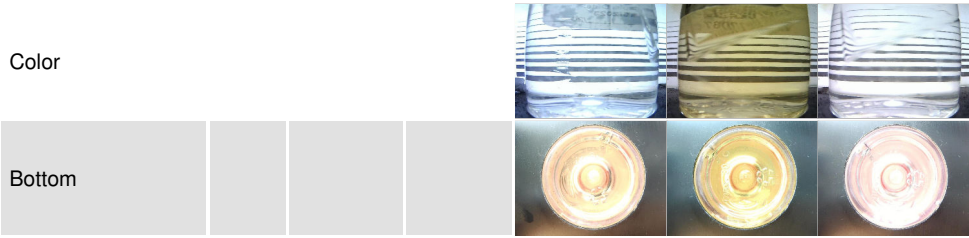
VISUAL	method	limit/base	current	history1	history2
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White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>.1	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
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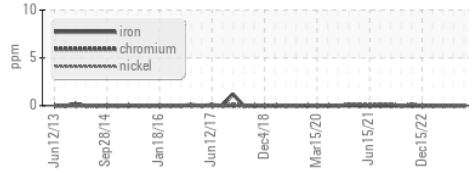
Visc @ 40°C	cSt	ASTM D7279(m)	34.0	34.3	34.3	34.1
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SAMPLE IMAGES	method	limit/base	current	history1	history2
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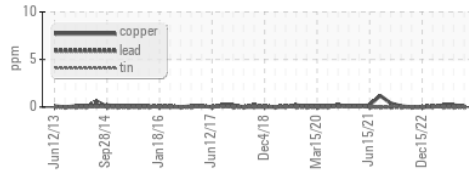


GRAPHS

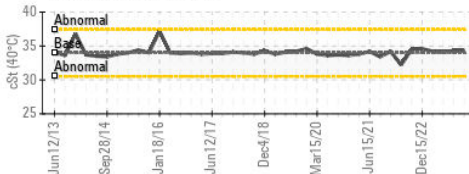
Ferrous Alloys



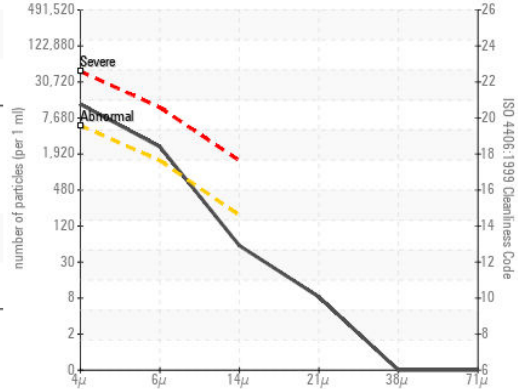
Non-ferrous Metals



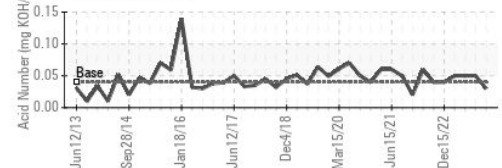
Viscosity @ 40°C



▲ Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0883392 **Received** : 14 Dec 2023
Lab Number : **02603330** **Diagnosed** : 15 Dec 2023
Unique Number : 5696415 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: TAN Man)

Petro Canada Lubricants Inc.
 385 Southdown Road
 Mississauga, ON
 CA L5J 2Y3
 Contact: Kyle Blezard
 kyle.blezard@HFSinclair.com
 T: (905)403-6768
 F: (905)822-6025

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.