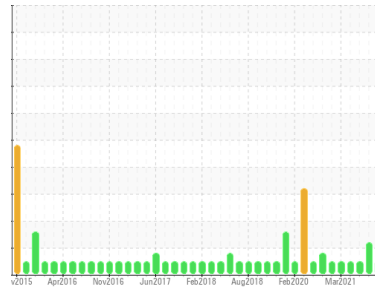




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
1 White Oil/028 #1HTU/P Pump/201A 1 Stage HTU Charge
 Machine Id
N/A 28GP201A

Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX SYNTHETIC EP 220 (82 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0902153	WC0783252	WC0301692
Sample Date	Client Info		25 Feb 2024	17 Feb 2023	06 Jan 2022
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >200	<1	4	2
Chromium	ppm	ASTM D5185(m) >15	0	0	0
Nickel	ppm	ASTM D5185(m) >15	<1	<1	0
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m)	0	0	0
Aluminum	ppm	ASTM D5185(m) >25	<1	0	0
Lead	ppm	ASTM D5185(m) >100	0	0	0
Copper	ppm	ASTM D5185(m) >200	<1	<1	<1
Tin	ppm	ASTM D5185(m) >25	0	0	0
Antimony	ppm	ASTM D5185(m) >5	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

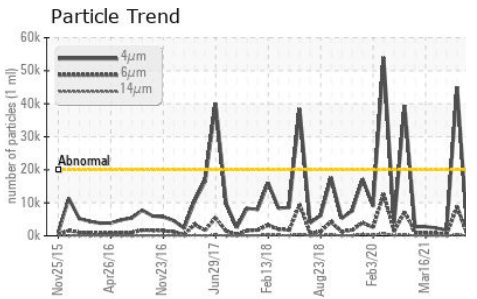
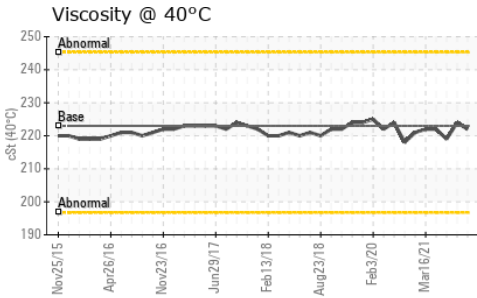
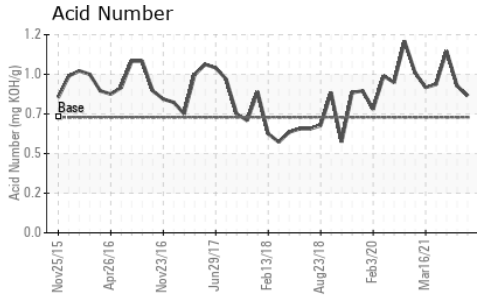
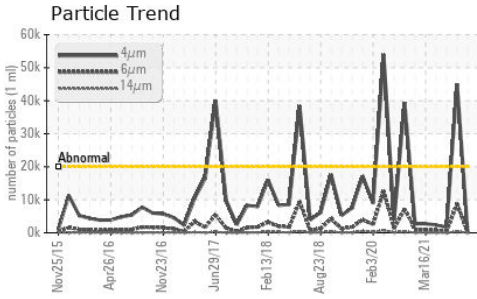
	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 33	31	14	18
Barium	ppm	ASTM D5185(m) 5	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0
Magnesium	ppm	ASTM D5185(m) 5	<1	<1	0
Calcium	ppm	ASTM D5185(m) 5	<1	<1	<1
Phosphorus	ppm	ASTM D5185(m) 437	408	449	429
Zinc	ppm	ASTM D5185(m) 5	<1	2	1
Sulfur	ppm	ASTM D5185(m) 5000	4871	4884	4760
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >50	0	<1	0
Sodium	ppm	ASTM D5185(m)	<1	<1	<1
Potassium	ppm	ASTM D5185(m) >20	<1	0	1

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	495	▲ 45040	1713
Particles >6µm	ASTM D7647	>5000	132	● 8798	328
Particles >14µm	ASTM D7647	>640	12	391	8
Particles >21µm	ASTM D7647	>160	6	108	2
Particles >38µm	ASTM D7647	>40	3	5	0
Particles >71µm	ASTM D7647	>10	2	1	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	16/14/11	▲ 23/20/16	18/16/10

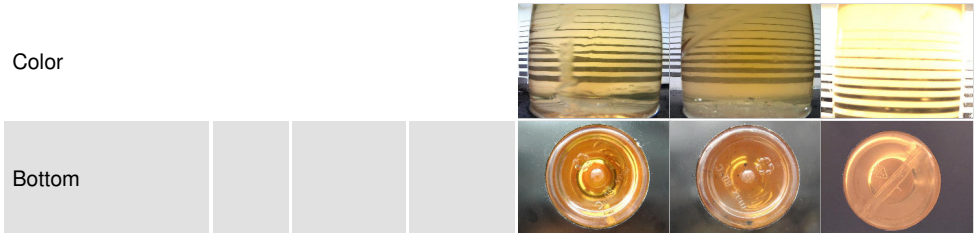


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.7	0.83	0.89	1.10

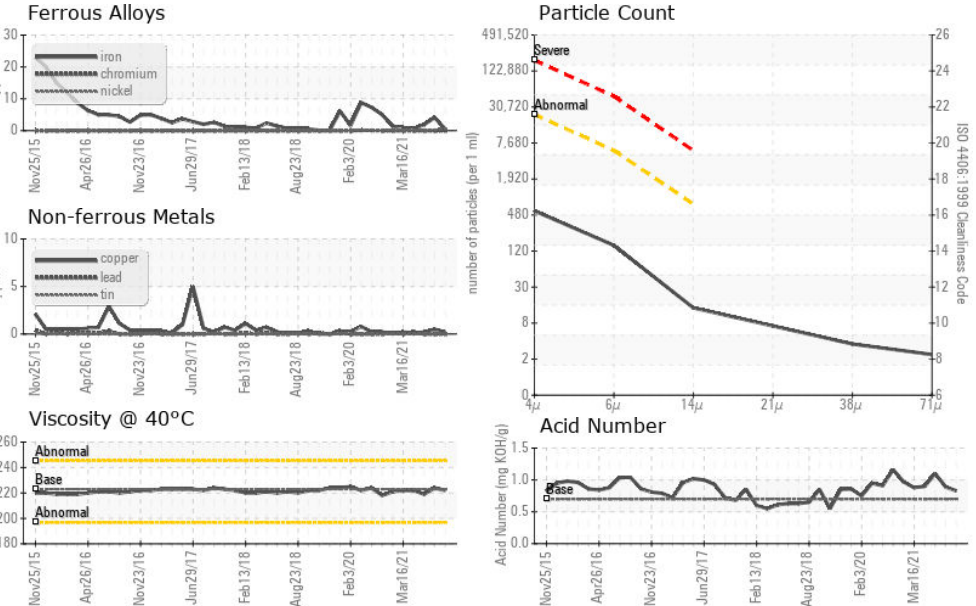
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	223	222	224	219

SAMPLE IMAGES



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0902153 **Received** : 11 Mar 2024
Lab Number : **02621264** **Tested** : 12 Mar 2024
Unique Number : 5746383 **Diagnosed** : 12 Mar 2024 - 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.