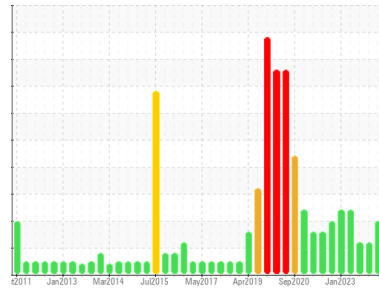




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
5 Utilities/031 Water Pumping/P Pump/757 Plant Water#7
 Machine Id
N/A 31GP757
 Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX EP 150 (60 LTR)

DIAGNOSIS

Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate 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		WC0957484	WC0925280	WC0894091
Sample Date	Client Info		02 Jul 2024	01 Apr 2024	05 Jan 2024
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			ABNORMAL	ATTENTION	ABNORMAL

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	199	208	209
Chromium	ppm	ASTM D5185(m)	>15	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>15	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<1	0	<1
Lead	ppm	ASTM D5185(m)	>100	<1	0	<1
Copper	ppm	ASTM D5185(m)	>200	8	8	8
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)	55	42	43	44
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	2	1	2
Magnesium	ppm	ASTM D5185(m)	2	<1	<1	<1
Calcium	ppm	ASTM D5185(m)	6	2	2	3
Phosphorus	ppm	ASTM D5185(m)	250	212	216	225
Zinc	ppm	ASTM D5185(m)	3	6	6	6
Sulfur	ppm	ASTM D5185(m)	7500	4421	4615	4870
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

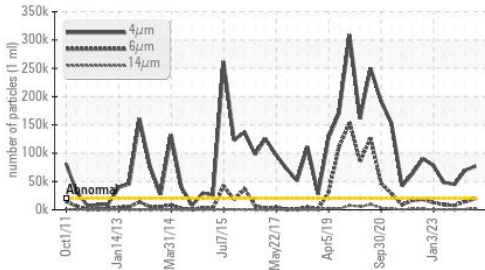
CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>50	4	3	6
Sodium	ppm	ASTM D5185(m)		2	2	2
Potassium	ppm	ASTM D5185(m)	>20	<1	0	<1

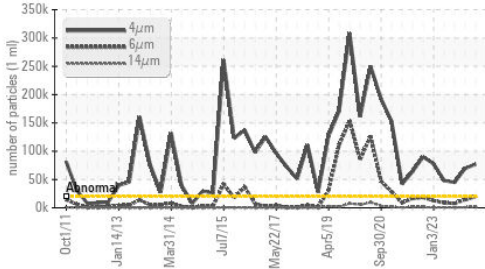
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 77124	69603	▲ 44958
Particles >6µm	ASTM D7647	>5000	▲ 20181	14346	● 7785
Particles >14µm	ASTM D7647	>640	▲ 1517	● 967	632
Particles >21µm	ASTM D7647	>160	▲ 404	● 249	171
Particles >38µm	ASTM D7647	>40	33	12	14
Particles >71µm	ASTM D7647	>10	9	0	4
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 23/22/18	● 23/21/17	▲ 23/20/16

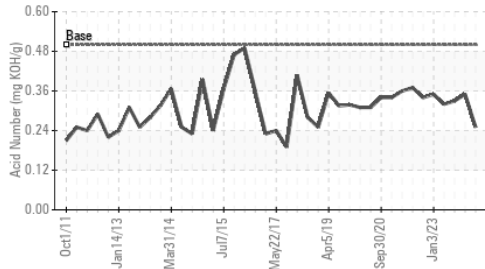
▲ Particle Trend



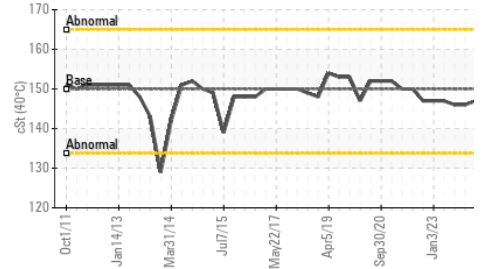
▲ Particle Trend



Acid Number



Viscosity @ 40°C



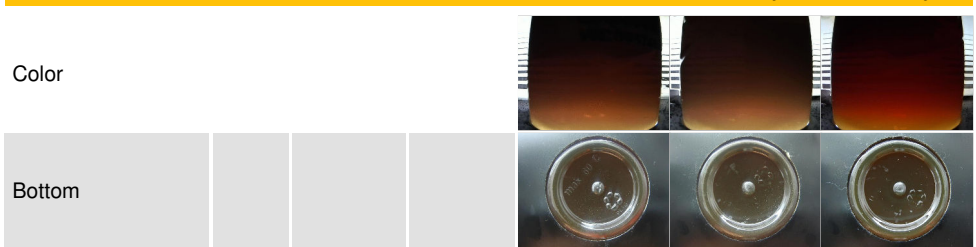
FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN) mg KOH/g	ASTM D974* 0.5	0.25	0.35	0.33	
VISUAL					
White Metal	scalar	Visual* NONE	LIGHT	VLITE	NONE
Yellow Metal	scalar	Visual* NONE	NONE	NONE	NONE
Precipitate	scalar	Visual* NONE	NONE	NONE	NONE
Silt	scalar	Visual* NONE	NONE	VLITE	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* >0.2	NEG	NEG	NEG
Free Water	scalar	Visual*	NEG	NEG	NEG

FLUID PROPERTIES

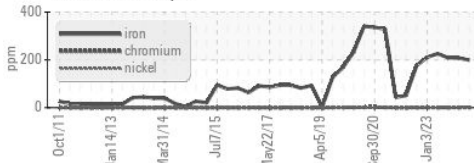
method	limit/base	current	history1	history2
Visc @ 40°C cSt	ASTM D7279(m) 150.0	147	146	146

SAMPLE IMAGES

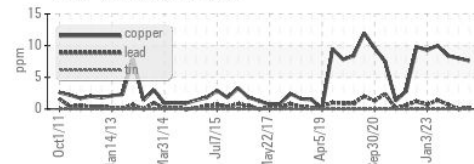


GRAPHS

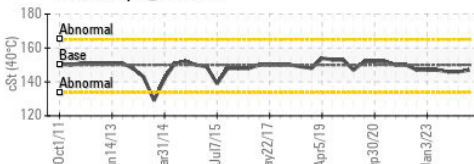
Ferrous Alloys



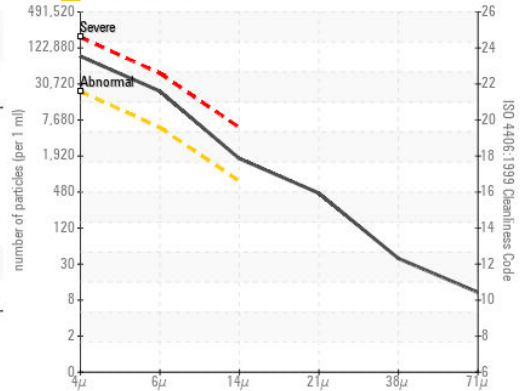
Non-ferrous Metals



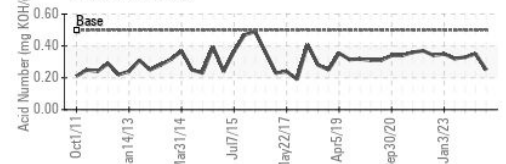
Viscosity @ 40°C



▲ Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0957484 **Received** : 09 Jul 2024
Lab Number : **02646802** **Tested** : 10 Jul 2024
Unique Number : 5812354 **Diagnosed** : 10 Jul 2024 - Wes Davis
Test Package : IND 2 (Additional Tests: TAN Man)

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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