



OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Area

FP-106 [10024086368]

Machine Id

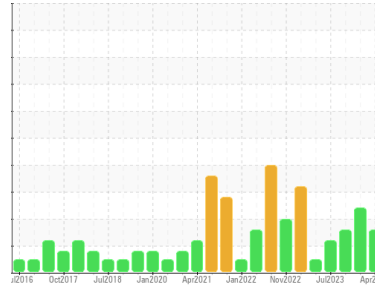
B23337-1 - AUGER 4 (NE) BIN RAW MATERIAL

Component

Gearbox

Fluid

PETRO CANADA ENDURATEX SYNTHETIC EP 320 (--- QTS)



DIAGNOSIS

Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. 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 moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

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		WC0907916	WC0872450	WC0851163
Sample Date	Client Info		01 Apr 2024	21 Dec 2023	28 Sep 2023
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	ABNORMAL	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 D5185m	>200	78	17	12
Chromium	ppm	ASTM D5185m	>15	1	<1	0
Nickel	ppm	ASTM D5185m	>15	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	2	0
Lead	ppm	ASTM D5185m	>100	1	<1	0
Copper	ppm	ASTM D5185m	>200	1	<1	<1
Tin	ppm	ASTM D5185m	>25	1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	<1	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	33	13	32	9
Barium	ppm	ASTM D5185m	5	0	7	0
Molybdenum	ppm	ASTM D5185m		<1	<1	0
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m	5	1	<1	<1
Calcium	ppm	ASTM D5185m	5	10	3	5
Phosphorus	ppm	ASTM D5185m	437	401	367	329
Zinc	ppm	ASTM D5185m	5	10	0	28
Sulfur	ppm	ASTM D5185m	5000	19770	18615	17131

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	1	<1	<1
Sodium	ppm	ASTM D5185m		1	0	<1
Potassium	ppm	ASTM D5185m	>20	2	1	2

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 114328	▲ 112363	▲ 83992
Particles >6µm	ASTM D7647	>5000	▲ 33394	▲ 41968	▲ 22300
Particles >14µm	ASTM D7647	>640	● 721	▲ 3023	● 1166
Particles >21µm	ASTM D7647	>160	111	▲ 567	211
Particles >38µm	ASTM D7647	>40	5	6	3
Particles >71µm	ASTM D7647	>10	3	0	1
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 24/22/17	▲ 24/23/19	▲ 24/22/17

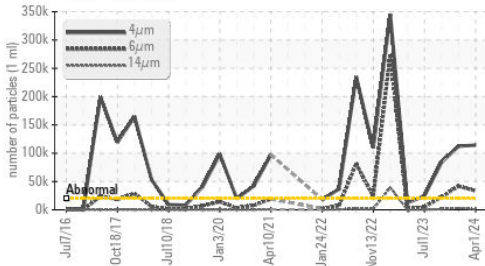
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.7	0.83	0.79	0.71

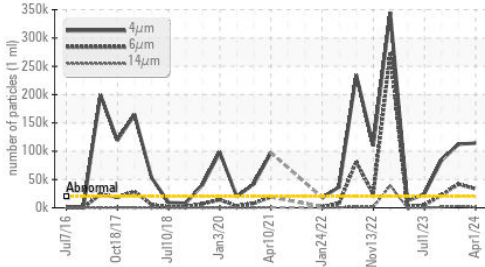


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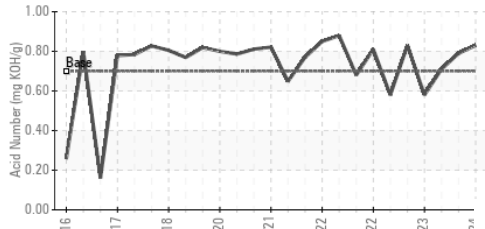
Particle Trend



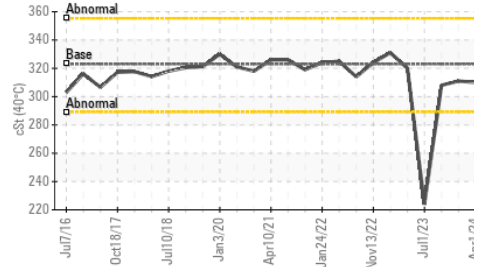
Particle Trend



Acid Number



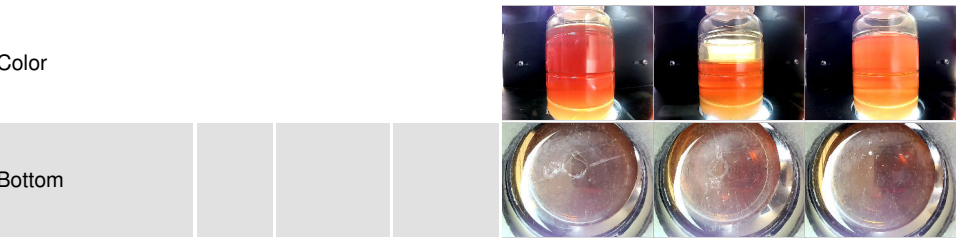
Viscosity @ 40°C



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

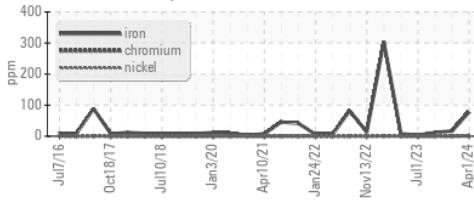
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	323	310	308

SAMPLE IMAGES

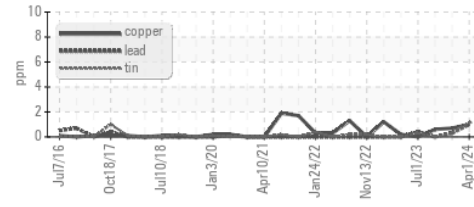


GRAPHS

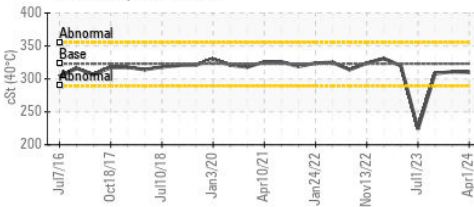
Ferrous Alloys



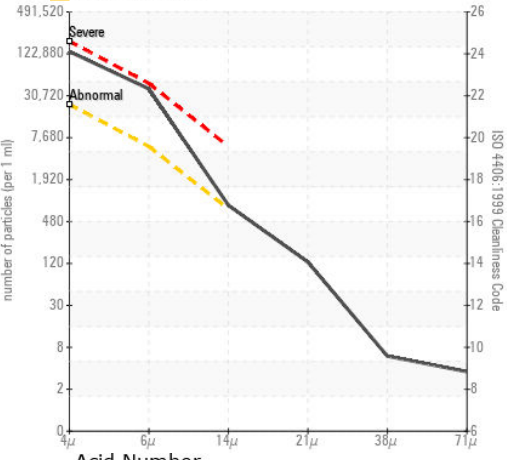
Non-ferrous Metals



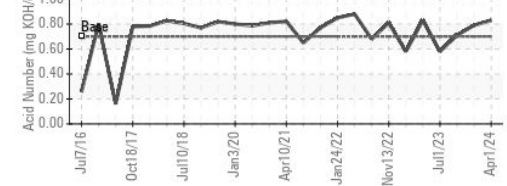
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0907916 **Received** : 02 Apr 2024
Lab Number : 06136347 **Tested** : 03 Apr 2024
Unique Number : 10955812 **Diagnosed** : 03 Apr 2024 - Wes Davis
Test Package : IND 2 (Additional Tests: PrtCount)

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 US 55912
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 F: (507)437-9805

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)