

Area

Water Injection [450328015]

Machine Id

Pump - Glycol Circulation (B) (S/N Sample Tag PA-38002B)

Component

Pump

Fluid

PETRO CANADA DURON HP 15W40 (7 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. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition

Viscosity of sample indicates oil is within SAE 10W30 range, advise investigate. 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		PC	PC	PC
Sample Date	Client Info		03 May 2024	07 Apr 2024	13 Mar 2024
Machine Age	kms	Client Info	0	0	0
Oil Age	kms	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	SEVERE	SEVERE

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

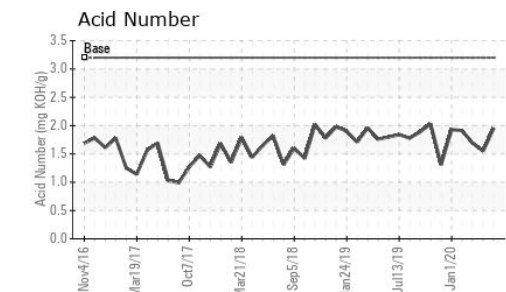
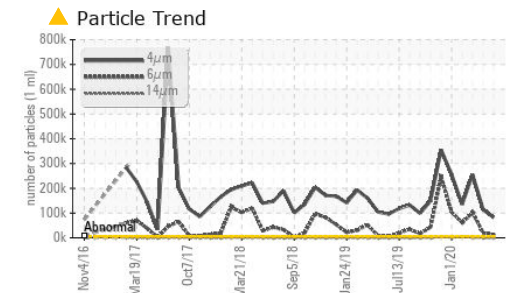
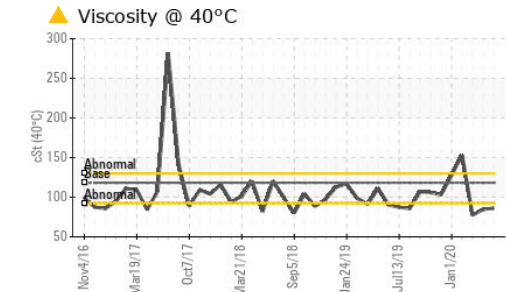
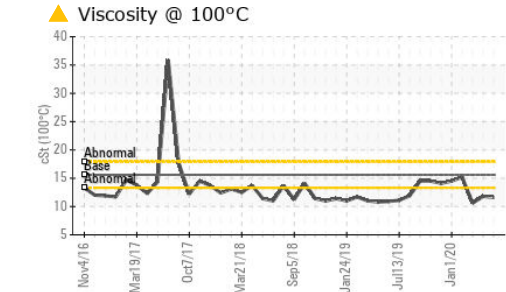
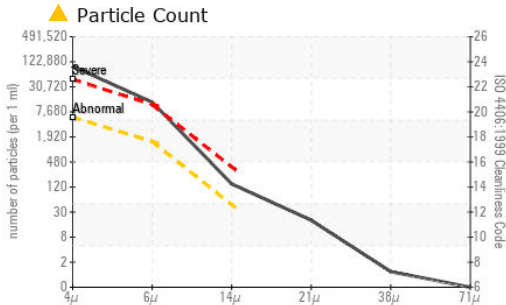
WEAR METALS	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>75	4	6	20
Chromium	ppm	ASTM D5185(m)	>5	0	0	0
Nickel	ppm	ASTM D5185(m)		0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>5	<1	<1	2
Lead	ppm	ASTM D5185(m)	>10	0	0	1
Copper	ppm	ASTM D5185(m)	>15	2	4	▲ 30
Tin	ppm	ASTM D5185(m)		0	0	<1
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	2	1	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	59	62	65
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	1010	955	973	1002
Calcium	ppm	ASTM D5185(m)	1070	1043	1043	1184
Phosphorus	ppm	ASTM D5185(m)	1150	1044	1034	1069
Zinc	ppm	ASTM D5185(m)	1270	1161	1175	1214
Sulfur	ppm	ASTM D5185(m)	2060	2644	2657	2955
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

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

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	82194	▲ 114109	▲ 254999
Particles >6µm	ASTM D7647	>1300	11411	▲ 20164	▲ 101822
Particles >14µm	ASTM D7647	>40	▲ 126	▲ 163	▲ 1136
Particles >21µm	ASTM D7647	>10	● 17	● 19	▲ 229
Particles >38µm	ASTM D7647	>3	1	2	▲ 12
Particles >71µm	ASTM D7647	>3	0	1	1
Oil Cleanliness	ISO 4406 (c)	>19/17/12	▲ 24/21/14	▲ 24/22/15	▲ 25/24/17

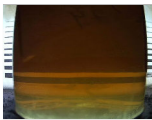
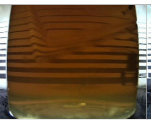




OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	3.2	1.95	1.55	1.69

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	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	VLITE
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
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	▲ 86.1	▲ 84.5	▲ 77.4
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	▲ 11.6	▲ 11.8	▲ 10.6
Viscosity Index (VI)	Scale	ASTM D2270*	139	125	132	122

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : 02636022
Unique Number : 5785184
Test Package : MAR 2 (Additional Tests: KV100, PrtCount, TAN MAN, VI)
Received : 16 May 2024
Tested : 17 May 2024
Diagnosed : 21 May 2024 - Kevin Marson

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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.