

Machine Id
DR191
Component
1 Hydraulic System
Fluid
PETRO CANADA ENVIRON MV 46 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. 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.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PC0080589	PC0087894	---
Sample Date	Client Info			17 Apr 2024	08 Apr 2024	---
Machine Age	hrs	Client Info		0	1812	---
Oil Age	hrs	Client Info		0	0	---
Oil Changed	Client Info			N/A	Not Changd	---
Sample Status				ABNORMAL	ABNORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.1	NEG	NEG	---

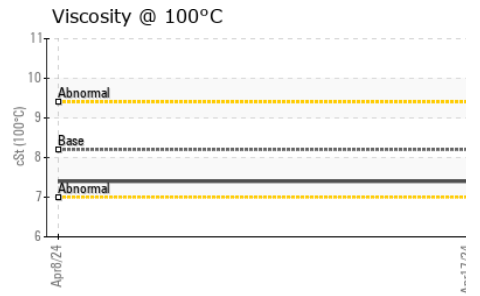
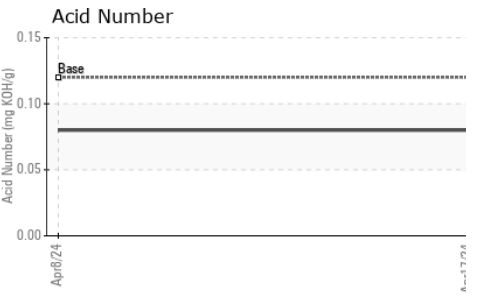
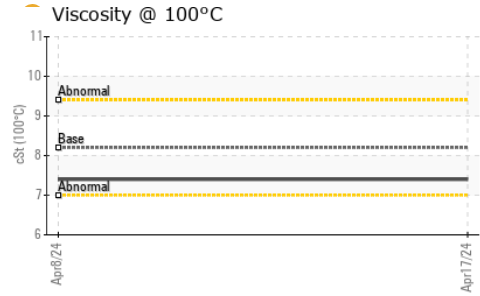
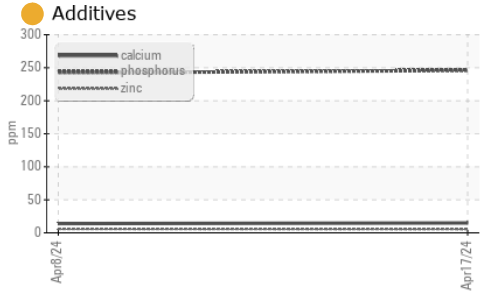
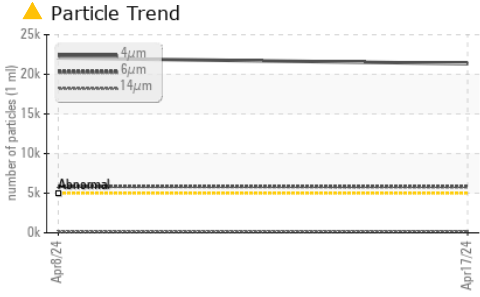
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	2	2	---
Chromium	ppm	ASTM D5185(m)	>10	<1	0	---
Nickel	ppm	ASTM D5185(m)	>10	0	0	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)		0	0	---
Aluminum	ppm	ASTM D5185(m)	>10	0	0	---
Lead	ppm	ASTM D5185(m)	>10	<1	<1	---
Copper	ppm	ASTM D5185(m)	>75	1	1	---
Tin	ppm	ASTM D5185(m)	>10	0	0	---
Antimony	ppm	ASTM D5185(m)		0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
Beryllium	ppm	ASTM D5185(m)		0	0	---
Cadmium	ppm	ASTM D5185(m)		0	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	3	2	---
Barium	ppm	ASTM D5185(m)	0	0	0	---
Molybdenum	ppm	ASTM D5185(m)	0	0	0	---
Manganese	ppm	ASTM D5185(m)	0	0	0	---
Magnesium	ppm	ASTM D5185(m)	0	<1	<1	---
Calcium	ppm	ASTM D5185(m)	0	15	14	---
Phosphorus	ppm	ASTM D5185(m)	650	246	242	---
Zinc	ppm	ASTM D5185(m)	0	6	6	---
Sulfur	ppm	ASTM D5185(m)	1420	2317	2353	---
Lithium	ppm	ASTM D5185(m)		<1	<1	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	0	0	---
Sodium	ppm	ASTM D5185(m)		2	2	---
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	21347	22058	---
Particles >6µm		ASTM D7647	>1300	5815	5863	---
Particles >14µm		ASTM D7647	>160	186	137	---
Particles >21µm		ASTM D7647	>40	34	25	---
Particles >38µm		ASTM D7647	>10	3	2	---
Particles >71µm		ASTM D7647	>3	1	1	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	22/20/15	22/20/14	---

OIL ANALYSIS REPORT



FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN) mg KOH/g	ASTM D974*	0.12	0.08	0.08	---

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	VLITE	---
Debris	scalar	Visual*	NONE	NONE	VLITE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	---
Free Water	scalar	Visual*		NEG	NEG	---

FLUID PROPERTIES

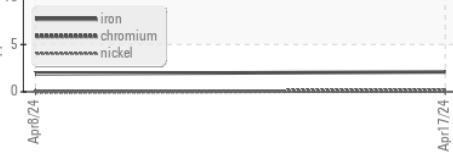
method	limit/base	current	history1	history2		
Visc @ 40°C	cSt	ASTM D7279(m)	45.0	41.6	41.5	---
Visc @ 100°C	cSt	ASTM D7279(m)	8.2	7.4	7.4	---
Viscosity Index (VI)	Scale	ASTM D2270*	158	144	144	---

SAMPLE IMAGES

method	limit/base	current	history1	history2
Color				no image
Bottom				no image

GRAPHS

Ferrous Alloys



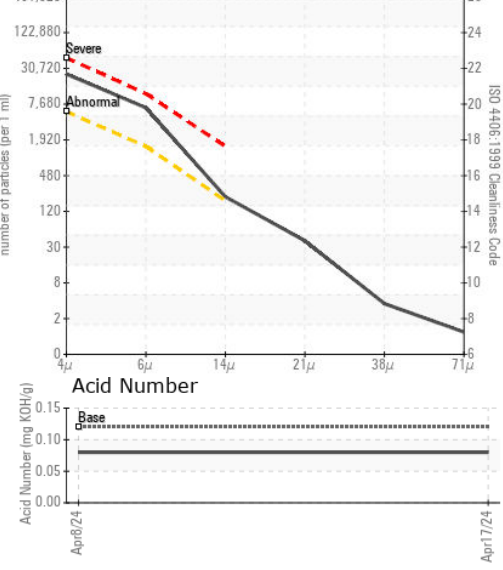
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0080589
Lab Number : 02630932
Unique Number : 5772085
Test Package : IND 2 (Additional Tests: KV100, VI)

Received : 23 Apr 2024
Tested : 23 Apr 2024
Diagnosed : 24 Apr 2024 - Kevin Marson

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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