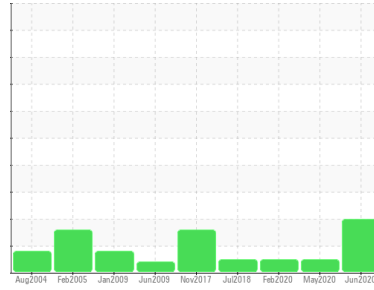


Area
[71133758]

Machine Id
WHPU MV1/17 LP2 (S/N Sample Tag ?)

Component
Hydraulic System

Fluid
CASTROL TRANSAQUA HT2 (--- LTR)



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

Iron ppm levels are noted. All other component wear rates are normal.

Contamination

Particles >14µm are abnormally high. Particles >21µm are notably high. Particles >6µm are notably high. The water content is negligible. 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 condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PC	PC	PC
Sample Date	Client Info	08 Jun 2020	15 May 2020	27 Feb 2020
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2	
PQ	ASTM D8184*	0	70	58	
Iron	ppm	ASTM D5185(m) >20	25	18	10
Chromium	ppm	ASTM D5185(m) >10	<1	<1	<1
Nickel	ppm	ASTM D5185(m) >10	0	<1	<1
Titanium	ppm	ASTM D5185(m)	<1	<1	<1
Silver	ppm	ASTM D5185(m)	<1	<1	<1
Aluminum	ppm	ASTM D5185(m) >10	<1	<1	<1
Lead	ppm	ASTM D5185(m) >20	1	<1	1
Copper	ppm	ASTM D5185(m) >20	2	<1	<1
Tin	ppm	ASTM D5185(m) >10	1	<1	<1
Antimony	ppm	ASTM D5185(m)	<1	1	<1
Vanadium	ppm	ASTM D5185(m)	<1	<1	<1
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	<1	<1	<1

ADDITIVES

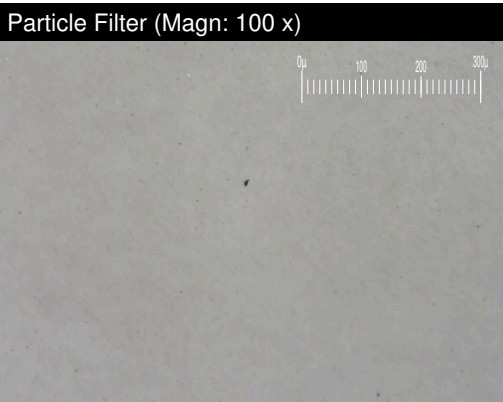
method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	184	191	187
Barium	ppm	ASTM D5185(m)	<1	<1	2
Molybdenum	ppm	ASTM D5185(m)	1	<1	<1
Manganese	ppm	ASTM D5185(m)	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1	2	3
Calcium	ppm	ASTM D5185(m)	6	8	13
Phosphorus	ppm	ASTM D5185(m)	173	196	182
Zinc	ppm	ASTM D5185(m)	5	2	6
Sulfur	ppm	ASTM D5185(m)	33	35	25
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

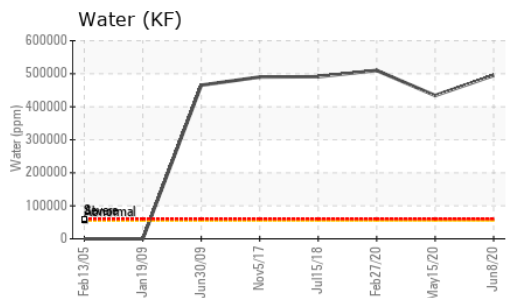
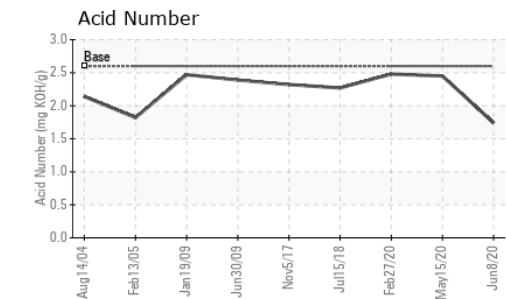
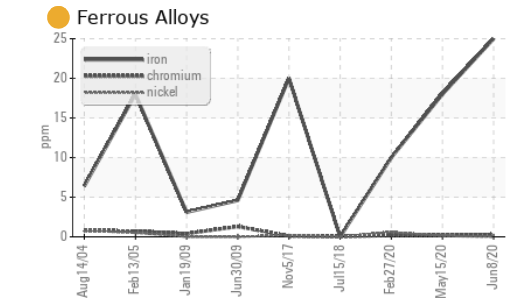
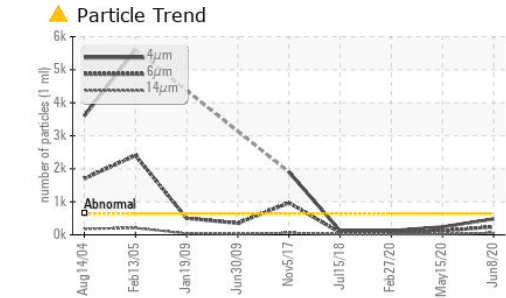
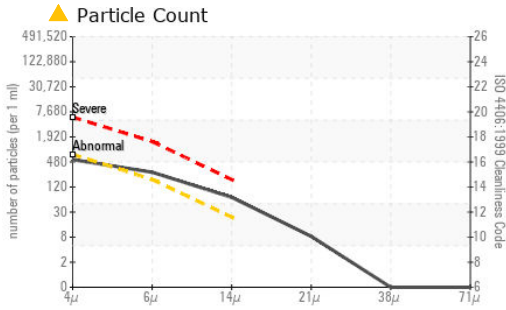
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >15	2	3	3
Sodium	ppm	ASTM D5185(m) >651	687	673	728
Potassium	ppm	ASTM D5185(m) >20	0	4	4
Water	%	ASTM D6304* >55	49.5	43.4	51.0
ppm Water	ppm	ASTM D6304* >55000	495000	434000	510000

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >640	480	240	120
Particles >6µm	ASTM D7647 >160	240	120	60
Particles >14µm	ASTM D7647 >20	60	15	15
Particles >21µm	ASTM D7647 >4	7	2	2
Particles >38µm	ASTM D7647 >3	0	0	0
Particles >71µm	ASTM D7647 >3	0	0	0



OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : 02359395
Unique Number : 5058832
Test Package : MAR 2 (Additional Tests: KF, KV100, PQ, PrtFilter, PrtFilterPrep)

Received : 12 Jun 2020
Tested : 15 Jun 2020
Diagnosed : 15 Jun 2020 - 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.

Suncor - Terra Nova Projects
 Scotia Centre, 235 Water Street
 St. John's, NL
 CA A1C 1B6
 Contact: Josh Hynes
 joshynes@suncor.com
 T: (709)778-3575
 F: (709)724-2835

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	2.6	1.74	2.45	2.48

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	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*	>55	>10%	>10%	>10%
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	2.4	2.4	2.3	2.4
Visc @ 100°C	cSt	ASTM D7279(m)	0.8	---	---	2.1

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color					no image	
Bottom					no image	
PrtFilter						