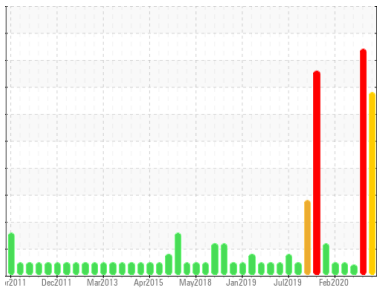
PROBLEM SUMMARY

Sample Rating Trend

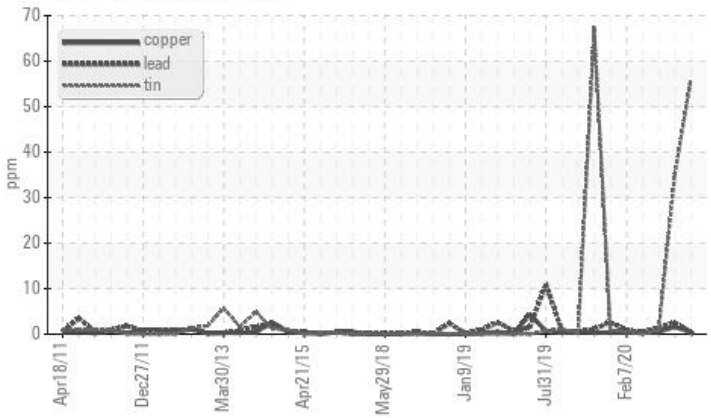


WEAR

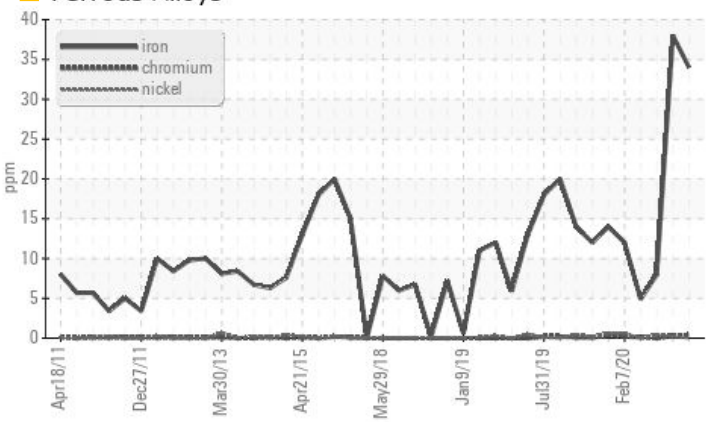
Area
Turret [71134107]
Machine Id
WHPU - LP Manual Valve (S/N Sample Tag: WH-586944)
Component
Hydraulic System
Fluid
CASTROL TRANSAQUA HT (--- LTR)

COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



▲ Ferrous Alloys



RECOMMENDATION

We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	ABNORMAL
Iron	ppm	ASTM D5185(m)	>20	▲ **34**	▲ 38	8
Tin	ppm	ASTM D5185(m)	>10	▲ **56**	▲ 35	<1
PrtFilter						

Customer Id: TERHAM
Sample No.: PC0030438
Lab Number: 02368977
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

HISTORICAL DIAGNOSIS

WEAR

04 Jun 2020 Diag: Kevin Marson

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. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.Tin ppm levels are severe. Iron ppm levels are abnormal. Antimony ppm levels are noted. A sharp increase in the iron level is noted. A sharp increase in the tin level is noted. A sharp increase in the antimony level is noted. Particles 15-25µm are abnormally high. Particles 25-50µm are abnormally high. Particles 5-15µm are abnormally high. The system cleanliness is above the acceptable limit for the target SAE AS4059 (replaces NAS 1638) cleanliness code. The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The reserve alkalinity of this fluid is acceptable. The water concentration level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

ISO

06 May 2020 Diag: Kevin Marson

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.All component wear rates are normal. Particles 15-25µm are abnormally high. The system cleanliness is above the acceptable limit for the target SAE AS4059 (replaces NAS 1638) cleanliness code. The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The reserve alkalinity of this fluid is acceptable. The water concentration level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

NORMAL

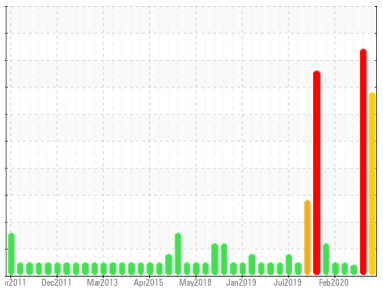
03 Mar 2020 Diag: Kevin Marson

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. The system cleanliness is acceptable for your target SAE AS4059 (replaces NAS 1638) cleanliness code. There is no indication of any contamination in the oil. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The reserve alkalinity of this fluid is acceptable. The water concentration level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
Turret [71134107]
Machine Id
WHPU - LP Manual Valve (S/N Sample Tag: WH-586944)
Component
Hydraulic System
Fluid
CASTROL TRANSAQUA HT (--- LTR)

DIAGNOSIS

Recommendation
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
Tin ppm levels are severe. Iron ppm levels are abnormal.

Contamination
The system cleanliness is acceptable for your target SAE AS4059 (replaces NAS 1638) cleanliness code. There is no indication of any contamination in the oil. The system and fluid cleanliness is acceptable.

Fluid Condition
The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The reserve alkalinity of this fluid is acceptable. The water concentration level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Particle Filter (Magn: 100 x)

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0030438**	PC0029735	PC
Sample Date		Client Info		**05 Aug 2020**	04 Jun 2020	06 May 2020
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				**SEVERE**	SEVERE	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	0	70
Iron	ppm	ASTM D5185(m)	>20	▲ **34**	▲ 38	8
Chromium	ppm	ASTM D5185(m)	>10	**<1**	<1	0
Nickel	ppm	ASTM D5185(m)	>10	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**<1**	<1	<1
Silver	ppm	ASTM D5185(m)		**<1**	0	4
Aluminum	ppm	ASTM D5185(m)	>10	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>20	**<1**	2	1
Copper	ppm	ASTM D5185(m)	>20	**<1**	2	<1
Tin	ppm	ASTM D5185(m)	>10	▲ **56**	▲ 35	<1
Antimony	ppm	ASTM D5185(m)		**0**	2	<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

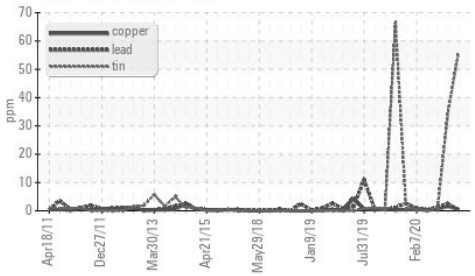
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**195**	189	202
Barium	ppm	ASTM D5185(m)		**<1**	2	<1
Molybdenum	ppm	ASTM D5185(m)		**1**	2	<1
Manganese	ppm	ASTM D5185(m)		**<1**	1	<1
Magnesium	ppm	ASTM D5185(m)		**<1**	2	2
Calcium	ppm	ASTM D5185(m)		**6**	19	16
Phosphorus	ppm	ASTM D5185(m)	145	**170**	171	238
Zinc	ppm	ASTM D5185(m)		**4**	17	31
Sulfur	ppm	ASTM D5185(m)		**27**	29	30
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**5**	3	1
Sodium	ppm	ASTM D5185(m)	>650	**667**	650	709
Potassium	ppm	ASTM D5185(m)	>20	**2**	0	13
Water	%	ASTM D6304*	>60	**50.9**	50.0	50.3
ppm Water	ppm	ASTM D6304*	>600000	**509000**	500000	503000

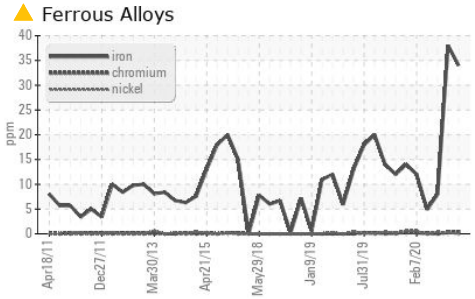
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles 5-15µm	count	NAS 1638	>15999	**12000**	▲ 97000	12000
Particles 15-25µm	count	NAS 1638	>2849	**1500**	▲ 6000	▲ 3000
Particles 25-50µm	count	NAS 1638	>505	**200**	▲ 700	300
Particles 50-100µm	count	NAS 1638	>89	**0**	0	0
Particles >100µm	count	NAS 1638	>15	**0**	0	0
NAS 1638	Class	NAS 1638	>6	**6**	▲ 9	▲ 7

OIL ANALYSIS REPORT

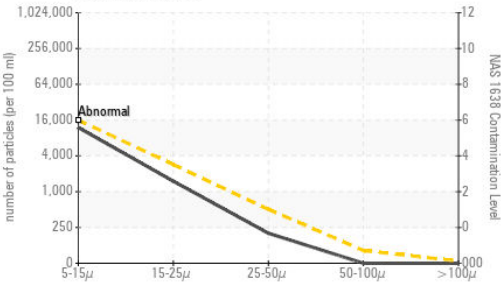
Non-ferrous Metals



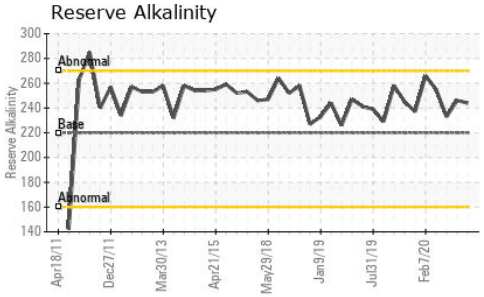
Ferrous Alloys



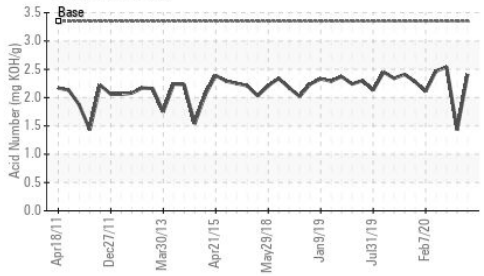
Particle Count



Reserve Alkalinity



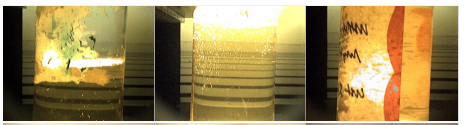
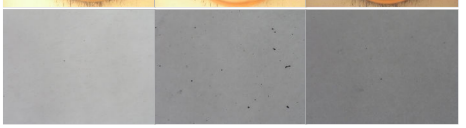
Acid Number



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	3.35	**2.41**	1.43	2.54
Alkiline Reserve (Oils)	ml KOH/g	ASTM D1121*	220	**244**	246	233

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*	>60	**>10%**	>10%	>10%
Free Water	scalar	Visual*		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
pH	Scale 0-14	ASTM D1287*		**8.53**	8.73	8.64
Visc @ 40°C	cSt	ASTM D7279(m)	2.3	**2.4**	2.3	2.2
Visc @ 100°C	cSt	ASTM D7279(m)		**---**	0.8	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
PrtFilter					

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0030438
Lab Number : 02368977
Unique Number : 5084424
Test Package : IND 2 (Additional Tests: KF, KV100, pH, PQ, PrtCountNAS, PrtFilter, PrtFilterPrep, ReserveAlk, TAN)

Received : 06 Aug 2020
Tested : 11 Aug 2020
Diagnosed : 11 Aug 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.

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