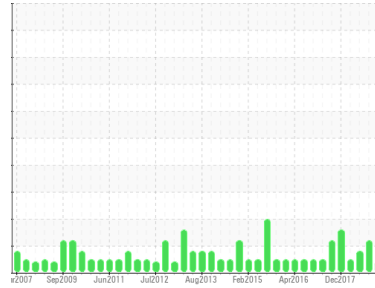




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
Hyd. shack # 2
 Machine Id
Q400#1 (S/N 8424)
 Component
Hydraulic System
 Fluid
ESSO NUTO H ISO 32 (200 GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil. MPC (Membrane Patch Colorimetry) test indicates acceptable levels of varnish present.

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			WC0312713	PP985528	WC985529
Sample Date	Client Info			21 Dec 2019	06 Jul 2019	04 Jan 2019
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				ATTENTION	ABNORMAL	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.05	NEG	NEG	NEG

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

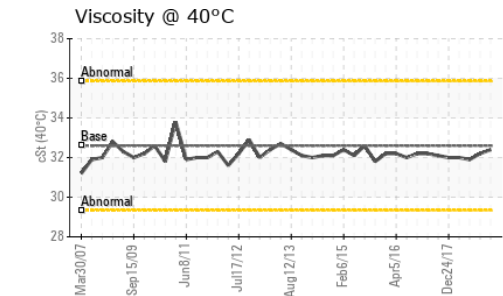
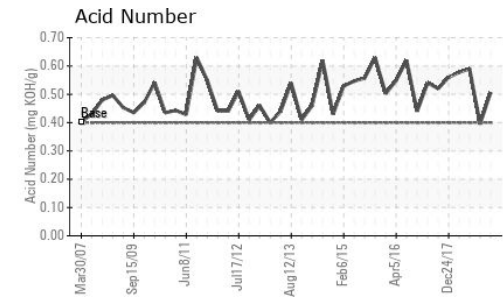
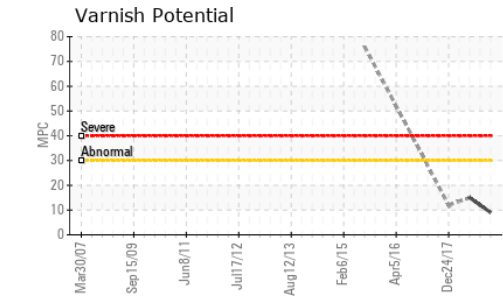
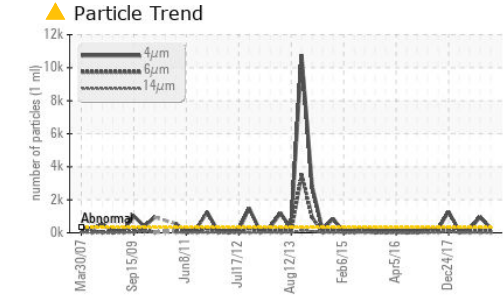
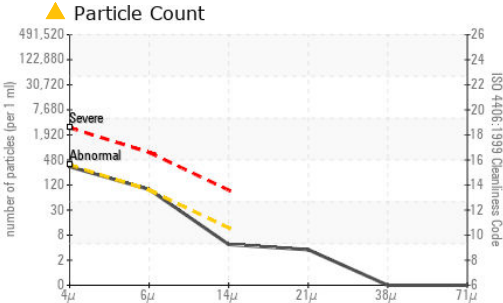
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<1	0	0
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	<1	0
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)	5	<1	1	<1
Calcium	ppm	ASTM D5185(m)	50	23	26	21
Phosphorus	ppm	ASTM D5185(m)	330	335	327	328
Zinc	ppm	ASTM D5185(m)	420	314	324	312
Sulfur	ppm	ASTM D5185(m)	2700	3555	3489	3304
Lithium	ppm	ASTM D5185(m)		<1	0	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	<1	<1	<1
Sodium	ppm	ASTM D5185(m)		0	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>320	291	▲ 961	210	
Particles >6µm	ASTM D7647	>80	▲ 83	▲ 162	63	
Particles >14µm	ASTM D7647	>10	4	▲ 14	▲ 13	
Particles >21µm	ASTM D7647	>3	3	4	5	
Particles >38µm	ASTM D7647	>3	0	0	0	
Particles >71µm	ASTM D7647	>3	0	0	0	
Oil Cleanliness	ISO 4406 (c)	>15/13/10	▲ 15/14/9	▲ 17/15/11	▲ 15/13/11	



OIL ANALYSIS REPORT

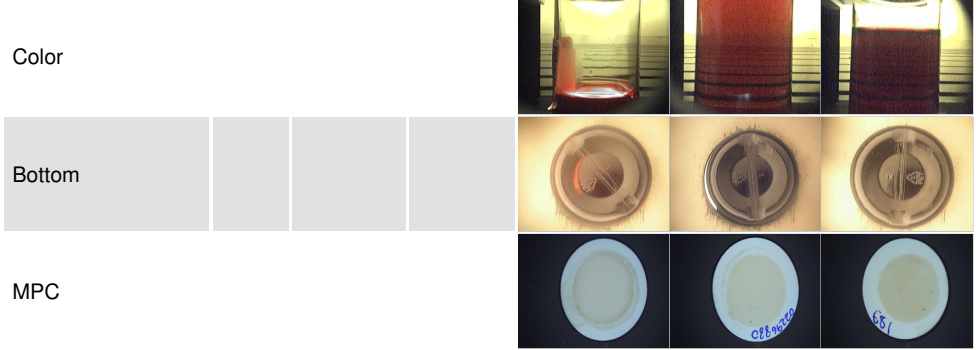


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	.40	0.506	0.395	0.590
MPC Varnish Potential	Scale	ASTM D7843(m)*	>15	9	12	▲ 15

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*	>0.05	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)	32.6	32.4	32.2	31.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
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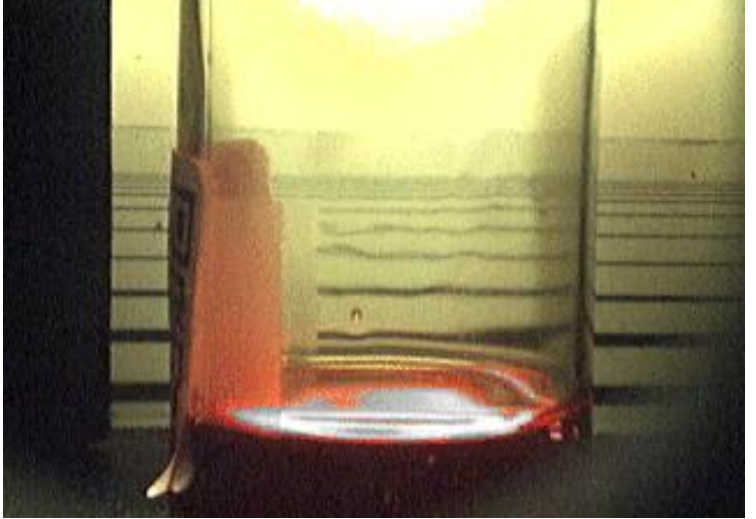
Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0312713 **Received** : 27 Dec 2019
Lab Number : **02329116** **Diagnosed** : 30 Dec 2019
Unique Number : 4980419 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: MPC, TAN Man)
 To discuss this sample 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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MPC (Varnish Test)



Sample Color & Clarity



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