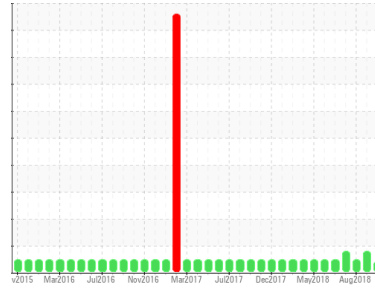


Machine Id
Press #3 6561231
 Component
Hydraulic System
 Fluid
SHELL TELLUS S2 M 46 (251 GAL)



DIAGNOSIS

Recommendation
 No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

Wear
 All component wear rates are normal.

Contamination
 MPC (Membrane Patch Colorimetry) test indicates a moderate concentration of varnish present. The system cleanliness is acceptable for your 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		PTKM2302819	PTKM2303843	PTKM2302395
Sample Date	Client Info		14 Sep 2018	18 Aug 2018	17 Aug 2018
Machine Age	hrs	Client Info	23672	23033	23033
Oil Age	hrs	Client Info	639	5894	5894
Oil Changed	Client Info		Changed	Not Changd	Not Changd
Sample Status			ABNORMAL	SEVERE	NORMAL

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

WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	<1	<1	<1
Chromium	ppm	ASTM D5185m >10	0	0	0
Nickel	ppm	ASTM D5185m	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >10	0	0	0
Lead	ppm	ASTM D5185m >10	0	0	0
Copper	ppm	ASTM D5185m >75	<1	<1	1
Tin	ppm	ASTM D5185m >10	0	<1	<1
Antimony	ppm	ASTM D5185m	0	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

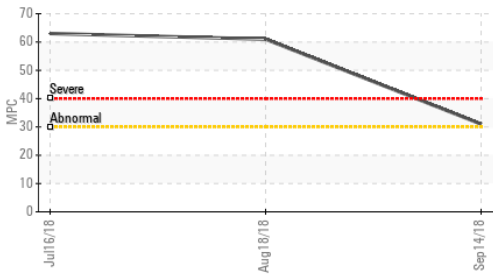
ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<1	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	<1	0	0
Manganese	ppm	ASTM D5185m	0	<1	0
Magnesium	ppm	ASTM D5185m	<1	0	0
Calcium	ppm	ASTM D5185m	28	1	2
Phosphorus	ppm	ASTM D5185m	269	213	210
Zinc	ppm	ASTM D5185m	308	159	159
Sulfur	ppm	ASTM D5185m	885	1243	1242

CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<1	0	0
Sodium	ppm	ASTM D5185m	0	0	0
Potassium	ppm	ASTM D5185m >20	<1	<1	<1

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		259	433	140
Particles >6µm	ASTM D7647	>2500	79	132	50
Particles >14µm	ASTM D7647	>320	8	14	7
Particles >21µm	ASTM D7647	>80	2	3	3
Particles >38µm	ASTM D7647	>20	0	0	0
Particles >71µm	ASTM D7647	>4	0	0	0
Oil Cleanliness	ISO 4406 (c)	>18/15	15/13/10	16/14/11	14/13/10

OIL ANALYSIS REPORT

▲ Varnish Potential



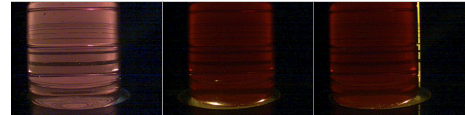
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.495	---	0.373
MPC Varnish Potential	Scale	ASTM D7843	>15	▲ 31	● 61	---

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	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.0	45.3	---	45.74

SAMPLE IMAGES		method	limit/base	current	history1	history2
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Color



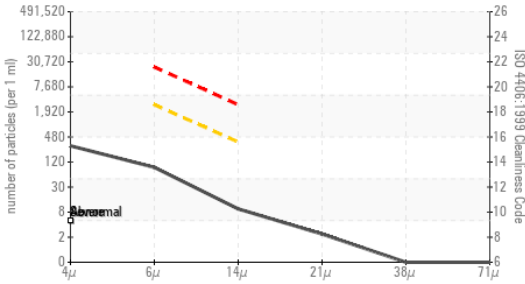
Bottom



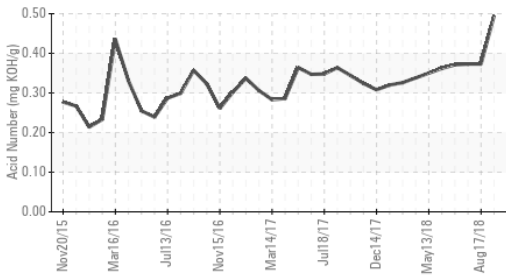
MPC



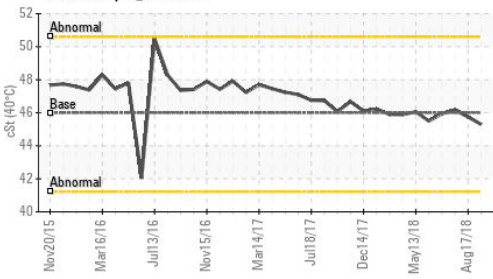
Particle Count



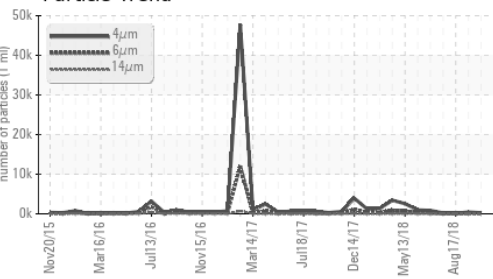
Acid Number



Viscosity @ 40°C



Particle Trend



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PTKM2302819 **Received** : 25 Sep 2018
Lab Number : **04558483** **Diagnosed** : 01 Oct 2018
Unique Number : 8342341 **Diagnostician** : Doug Bogart
Test Package : MOB 2 (Additional Tests: MPC)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

NIAGARA BOTTLING
 11031 88TH AVE
 PLEASANT PRAIRIE, WI
 US 53158
 Contact: AJ

T: (909)239-7599

F:

MPC (Varnish Test)



Sample Color & Clarity



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