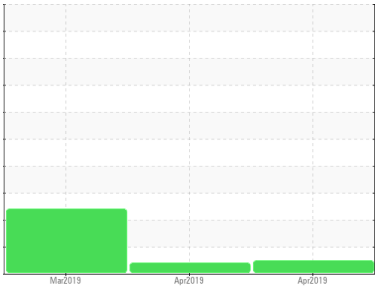
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
RIG 2
Machine Id
R2-TD-HYD
Component
Hydraulic System
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear
All component wear rates are normal.

Contamination
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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		**KLM2338513**	KLM2338910	KLM2339594
Sample Date		Client Info		**17 Apr 2019**	15 Apr 2019	21 Mar 2019
Machine Age	days	Client Info		**43570**	43568	43543
Oil Age	days	Client Info		**17**	15	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**NORMAL**	ATTENTION	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**1**	<1	19
Chromium	ppm	ASTM D5185m	>10	**0**	0	<1
Nickel	ppm	ASTM D5185m		**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>10	**<1**	<1	0
Lead	ppm	ASTM D5185m	>10	**<1**	<1	0
Copper	ppm	ASTM D5185m	>75	**4**	5	<1
Tin	ppm	ASTM D5185m	>10	**0**	0	<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**	1	9
Barium	ppm	ASTM D5185m		**<1**	<1	0
Molybdenum	ppm	ASTM D5185m		**<1**	<1	<1
Manganese	ppm	ASTM D5185m		**0**	0	<1
Magnesium	ppm	ASTM D5185m		**4**	4	4
Calcium	ppm	ASTM D5185m		**38**	41	27
Phosphorus	ppm	ASTM D5185m		**172**	168	245
Zinc	ppm	ASTM D5185m		**204**	203	20
Sulfur	ppm	ASTM D5185m		**1130**	987	4846

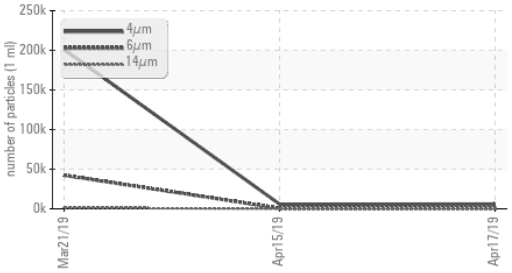
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**<1**	<1	2
Sodium	ppm	ASTM D5185m		**<1**	<1	<1
Potassium	ppm	ASTM D5185m	>20	**0**	0	1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**6027**	5832	201155
Particles >6µm		ASTM D7647	>1300	**667**	608	▲ 42359
Particles >14µm		ASTM D7647	>160	**34**	39	▲ 1198
Particles >21µm		ASTM D7647	>40	**8**	8	▲ 306
Particles >38µm		ASTM D7647	>10	**0**	1	▲ 16
Particles >71µm		ASTM D7647	>3	**0**	0	▲ 2
Oil Cleanliness		ISO 4406 (c)	>17/14	**17/12**	16/12	▲ 23/17

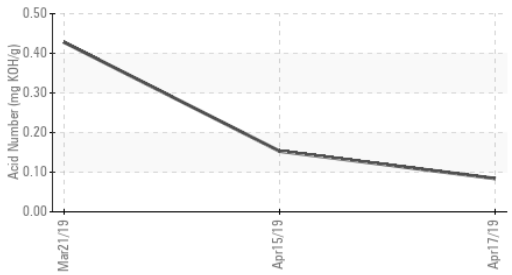
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.084**	0.153	0.428

OIL ANALYSIS REPORT

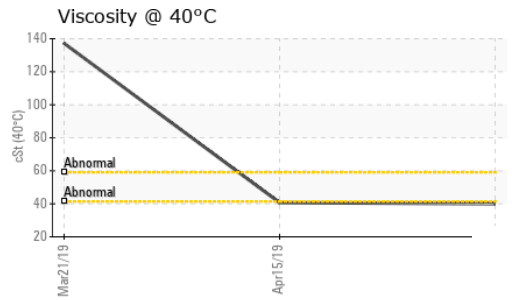
Particle Trend



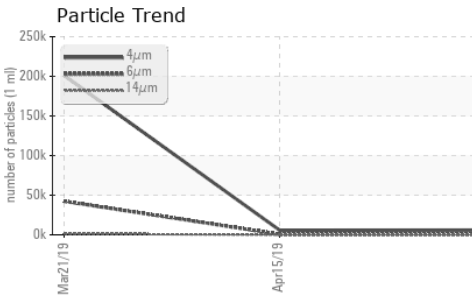
Acid Number



Viscosity @ 40°C



Particle Trend



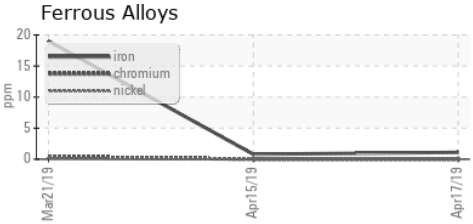
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	▲ HEAVY
Sand/Dirt	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		**40.0**	▲ 40.7	137.2

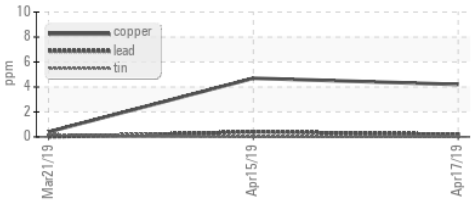
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

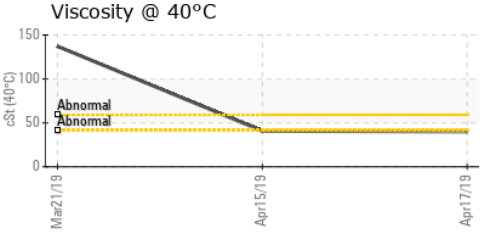
Ferrous Alloys



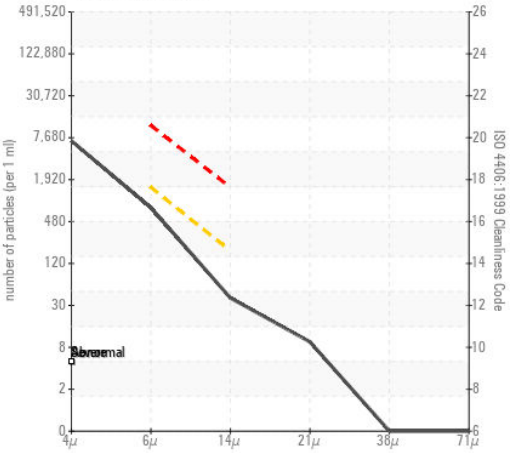
Non-ferrous Metals



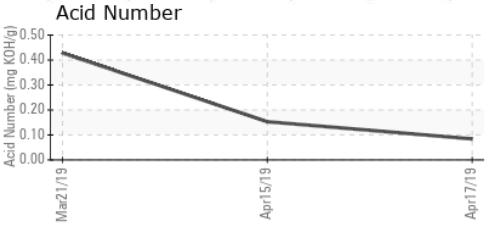
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KLM2338513
Lab Number : 04702177
Unique Number : 8578699
Test Package : MOB 2

Received : 29 Apr 2019
Diagnosed : 30 Apr 2019
Diagnostician : Wes Davis

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)

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