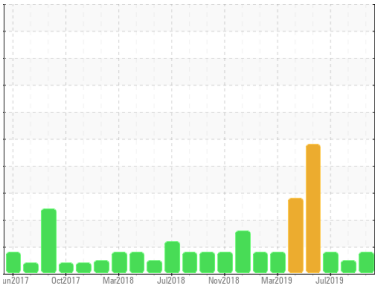
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
RAW MATS
Machine Id
2 BALL MILL
Component
Gearbox
Fluid
MOBIL SHC 630 (29 GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

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		**WC0482823**	WC0351513	WC0351507
Sample Date		Client Info		**07 Jul 2020**	31 Jul 2019	01 Jul 2019
Machine Age	days	Client Info		**0**	0	0
Oil Age	days	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	NORMAL	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**18**	13	29
Iron	ppm	ASTM D5185m	>200	**<1**	<1	<1
Chromium	ppm	ASTM D5185m	>15	**0**	0	0
Nickel	ppm	ASTM D5185m	>15	**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>25	**0**	0	0
Lead	ppm	ASTM D5185m	>100	**<1**	0	0
Copper	ppm	ASTM D5185m	>200	**<1**	0	0
Tin	ppm	ASTM D5185m	>25	**0**	<1	0
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	<1
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**2**	4	8
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m		**0**	0	0
Calcium	ppm	ASTM D5185m		**1**	0	0
Phosphorus	ppm	ASTM D5185m		**374**	365	414
Zinc	ppm	ASTM D5185m		**0**	3	0
Sulfur	ppm	ASTM D5185m		**243**	81	77

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**32**	34	34
Sodium	ppm	ASTM D5185m		**0**	<1	4
Potassium	ppm	ASTM D5185m	>20	**0**	0	0
Water	%	ASTM D6304	>0.2	**0.005**	0.005	0.005
ppm Water	ppm	ASTM D6304	>2000	**53.7**	57.2	50

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>1300	▲ **3859**	924	▲ 1733
Particles >6µm		ASTM D7647	>320	▲ **614**	203	▲ 371
Particles >14µm		ASTM D7647	>40	**28**	10	15
Particles >21µm		ASTM D7647	>10	**5**	3	2
Particles >38µm		ASTM D7647	>3	**1**	2	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>17/15/12	▲ **19/16/12**	17/15/10	▲ 18/16/11

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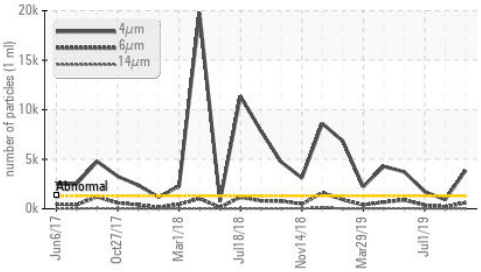
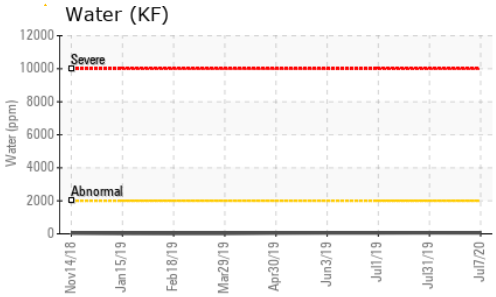
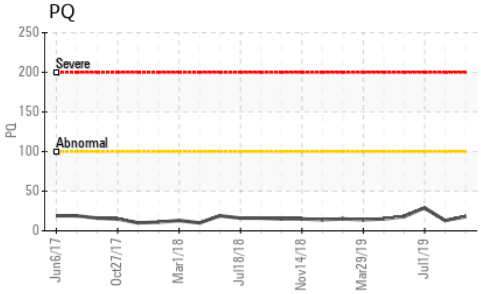
Particle Trend



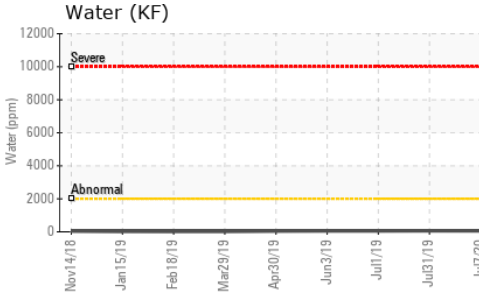
Water (KF)



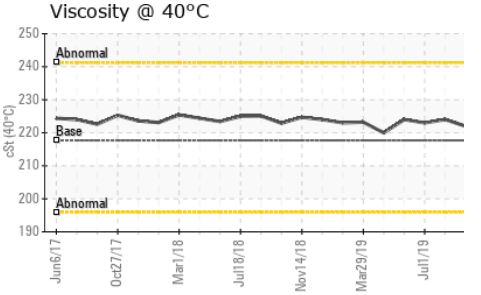
PQ



Water (KF)



Viscosity @ 40°C

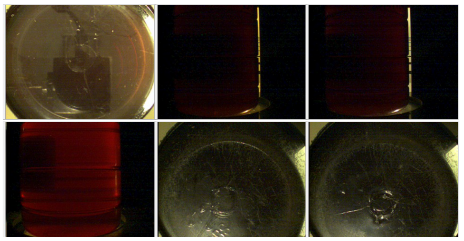


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.351**	0.380	0.264

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**VLITE**	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	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

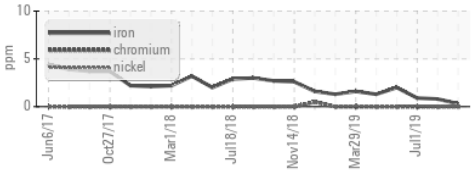
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	217.7	**222**	224	223

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

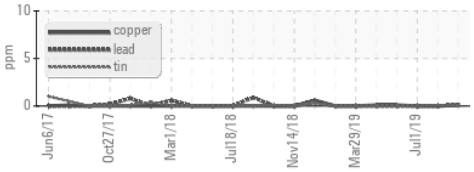


GRAPHS

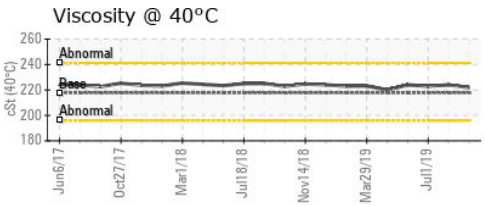
Ferrous Alloys



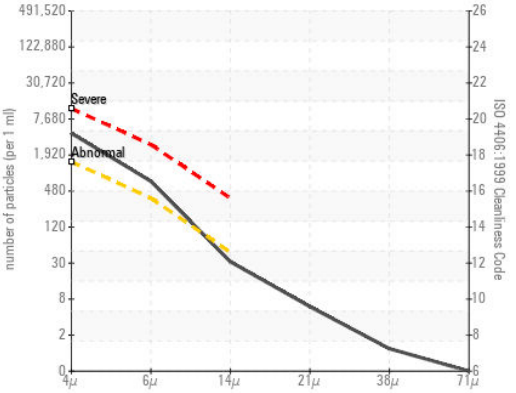
Non-ferrous Metals



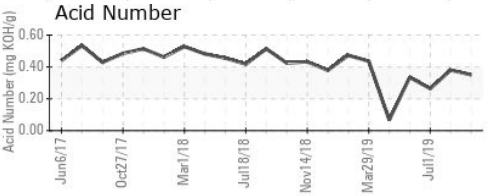
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0482823
Lab Number : 05014012
Unique Number : 9089171
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)

Received : 07 Jul 2020
Tested : 08 Jul 2020
Diagnosed : 08 Jul 2020 - Don Baldridge

JAMES HARDIE BUILDING PRODUCTS - PULASKI
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US 24031
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mike.mitchell@jameshardie.com
T:
F:

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)