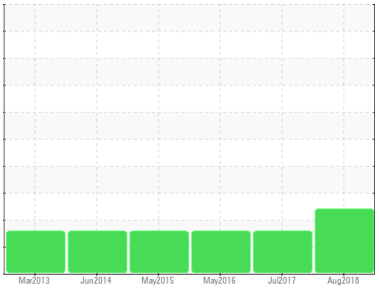
DIAMOND WTG ENGINEERING & SERVICES, INC.
a group company of MITSUBISHI HEAVY INDUSTRIES, LTD.

PROBLEM SUMMARY

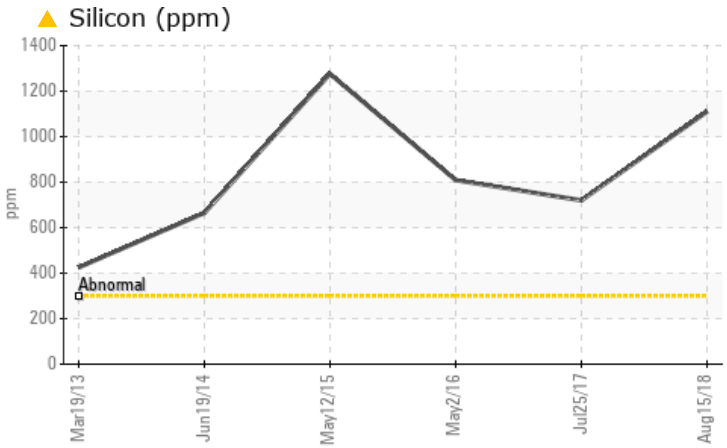
Sample Rating Trend

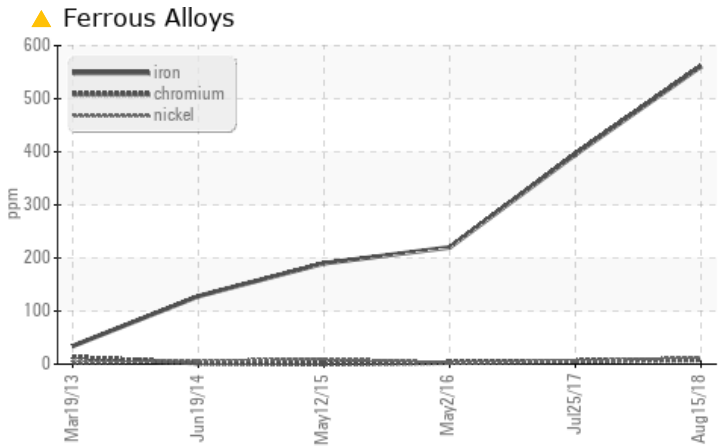


DIRT

Machine Id
CHW-041 MAIN BEARING
Component
Grease
Fluid
MOBIL MOBILITH SHC PM 220 (--- GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Nickel	ppm	ASTM D5185m		▲ **12**	5	2
Silicon	ppm	ASTM D5185m	>+300	▲ **1110**	▲ 720	▲ 809

Customer Id: MITCAL
Sample No.: MHI000530
Lab Number: 04651716
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

25 Jul 2017 Diag: Doug Bogart

DIRT

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Elemental level of silicon (Si) above normal. The AN level is acceptable for this fluid.

view report

02 May 2016 Diag: Jonathan Hester

DIRT

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Elemental level of silicon (Si) above normal indicating ingress of seal material. The AN level is acceptable for this fluid.

view report

12 May 2015 Diag: Doug Bogart

DIRT

No corrective action is recommended at this time.All component wear rates are normal. Elemental level of silicon (Si) above normal indicating ingress of seal material. The AN level is acceptable for this fluid.

view report

DIAMOND WTG ENGINEERING & SERVICES, INC.
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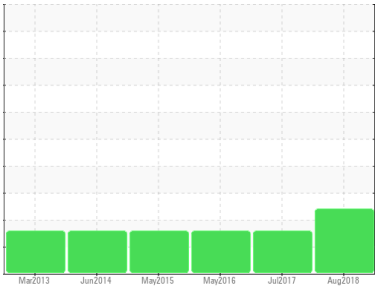
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
CHW-041 MAIN BEARING
Component
Grease
Fluid
MOBIL MOBILITH SHC PM 220 (--- 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.

Grease Condition
The AN level is acceptable for this fluid.

▲ Contaminants
Elemental level of silicon (Si) above normal.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**MHI000530**	MHII2276724	MHI004854
Sample Date		Client Info		**15 Aug 2018**	25 Jul 2017	02 May 2016
Machine Age	hrs	Client Info		**0**	0	24496
Grease Age	hrs	Client Info		**0**	0	0
Grease Serviced		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184	>200	**297**	189	170
Iron	ppm	ASTM D5185m	>30000	**561**	395	220
Chromium	ppm	ASTM D5185m	>150	**8**	6	3
Nickel	ppm	ASTM D5185m		▲ **12**	5	2
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m		**<1**	<1	<1
Aluminum	ppm	ASTM D5185m		**2**	7	<1
Lead	ppm	ASTM D5185m		**0**	0	0
Copper	ppm	ASTM D5185m		**7**	24	5
Tin	ppm	ASTM D5185m		**0**	14	0
Antimony	ppm	ASTM D5185m		**2**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**2**	<1	<1

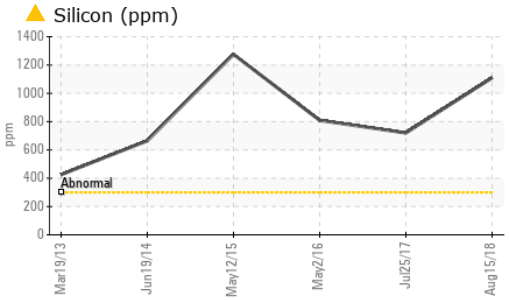
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**9**	17	0
Barium	ppm	ASTM D5185m		**2**	0	0
Molybdenum	ppm	ASTM D5185m		**2**	0	5
Manganese	ppm	ASTM D5185m		**4**	4	2
Magnesium	ppm	ASTM D5185m		**0**	0	0
Calcium	ppm	ASTM D5185m		**28**	76	5
Phosphorus	ppm	ASTM D5185m		**2282**	1925	2131
Zinc	ppm	ASTM D5185m		**3769**	2844	3240
Sulfur	ppm	ASTM D5185m		**9375**	8034	9216

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+300	▲ **1110**	▲ 720	▲ 809
Sodium	ppm	ASTM D5185m		**10**	11	5
Potassium	ppm	ASTM D5185m	>20	**53**	7	22
Water	%	ASTM D6304	>0.5	**0.091**	0.111	0.059
ppm Water	ppm	ASTM D6304	>5000	**910**	1110	590

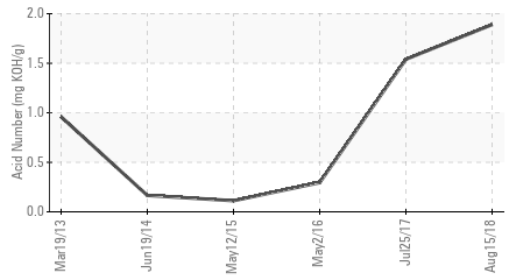
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**1.89**	1.54	0.295

OIL ANALYSIS REPORT

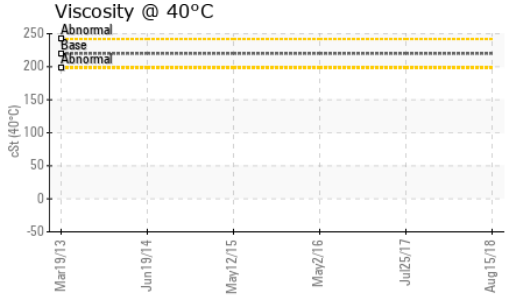
Silicon (ppm)



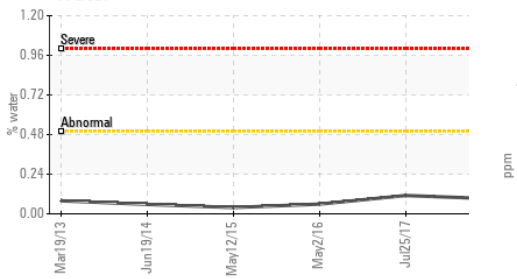
Acid Number



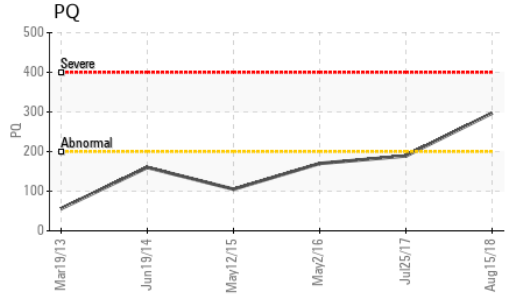
Viscosity @ 40°C



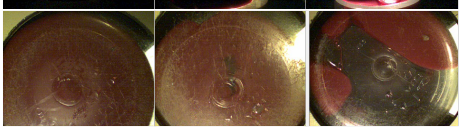
Water



PQ

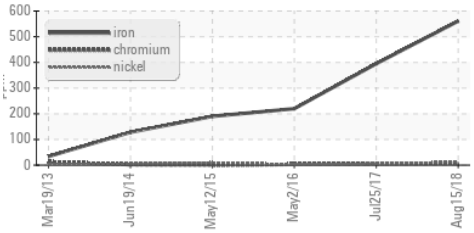


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.5	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

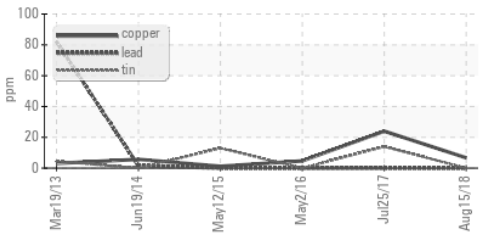
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

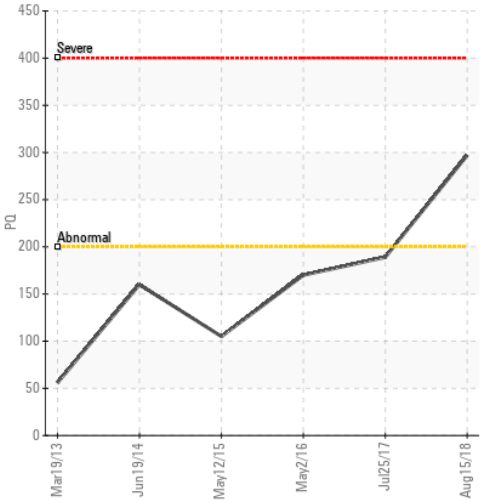
Ferrous Alloys



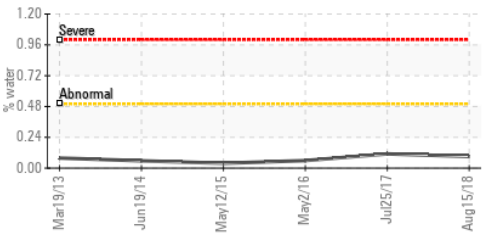
Non-ferrous Metals



PQ



Water



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MHI000530 **Received** : 15 Feb 2019
Lab Number : 04651716 **Diagnosed** : 24 Feb 2019
Unique Number : 8498216 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: KF, PQ)

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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