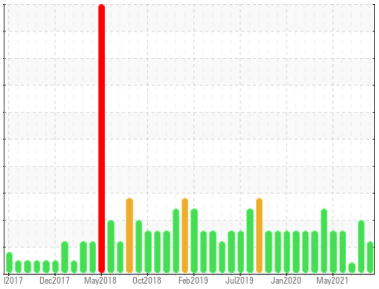
PROBLEM SUMMARY

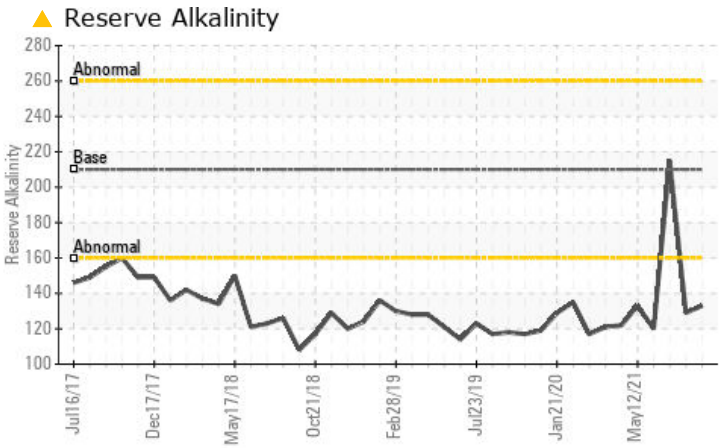
Sample Rating Trend



DEGRADATION

Area
RHOB/HYDRAULICS
Machine Id
E - Ladle Lift Hydraulics
Component
Tank Hydraulic System
Fluid
FORSYTHE NO FIRE WG 200R (1320 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Due to the low reserve alkalinity it is advised that you contact FORSYTHE to assist in restoring the proper amine concentration. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Alkiline Reserve (Oils)	ml KOH/g	ASTM D1121	210	▲ 133	▲ 129	215
PrtFilter						

Customer Id: CUSANY
Sample No.: WC1234567
Lab Number: 01234567
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (905)569-8600 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (905)569-8600 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	MISSED	May 18 2022	?	We recommend an early resample to monitor this condition.
Contact Required	MISSED	May 18 2022	?	Due to the low reserve alkalinity it is advised that you contact FORSYTHE to assist in restoring the proper amine concentration.

HISTORICAL DIAGNOSIS

01 Mar 2022 Diag: Kevin Marson

DEGRADATION

Due to the low reserve alkalinity it is advised that you contact FORSYTHE to assist in restoring the proper amine concentration. We recommend an early resample to monitor this condition.Copper ppm levels are abnormal. Oil cooler core leaching or motor piston wear is indicated. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The reserve alkalinity of this fluid is lower than acceptable. The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The water concentration level is acceptable for this fluid.

view report

24 Oct 2021 Diag: Kevin Marson

VISCOSITY

Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. Viscosity of sample indicates oil is within ISO 32 range, advise investigate. The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The reserve alkalinity of this fluid is acceptable. The water concentration level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

19 Sep 2021 Diag: Kevin Marson

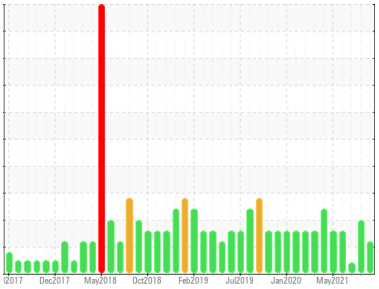
DEGRADATION

Due to the low reserve alkalinity it is advised that you contact FORSYTHE to assist in restoring the proper amine concentration. We recommend an early resample to monitor this condition. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using IND 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.Component wear rates appear to be normal (unconfirmed). The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The reserve alkalinity of this fluid is lower than acceptable. Viscosity of sample indicates oil is within ISO 32 range, advise investigate. The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The water concentration level is acceptable for this fluid.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION

Area
RHOB/HYDRAULICS
Machine Id
E - Ladle Lift Hydraulics
Component
Tank Hydraulic System
Fluid
FORSYTHE NO FIRE WG 200R (1320 GAL)

DIAGNOSIS

Recommendation

Due to the low reserve alkalinity it is advised that you contact FORSYTHE to assist in restoring the proper amine concentration. We recommend an early resample to monitor this condition.

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 reserve alkalinity of this fluid is lower than acceptable. The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The water concentration level is acceptable for this fluid.

SAMPLE INFORMATION	method	limit/base	current	history 1	history 2
Sample Number			**WC0690939**	WC0678084	WC0636555
Sample Date			**10 Apr 2022**	01 Mar 2022	24 Oct 2021
Machine Age	hrs		**0**	0	0
Oil Age	hrs		**0**	0	0
Oil Changed			**N/A**	Not Changd	N/A
Sample Status			**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history 1	history 2
PQ		ASTM D8184	>99999	**0**	0	0
Iron	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**<1**	<1	<1
Silver	ppm	ASTM D5185(m)		**<1**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	**1**	2	1
Lead	ppm	ASTM D5185(m)	>20	**<1**	1	<1
Copper	ppm	ASTM D5185(m)	>20	**<1**	▲ 42	14
Tin	ppm	ASTM D5185(m)	>20	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**<1**	<1	1
Vanadium	ppm	ASTM D5185(m)		**0**	<1	<1
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**<1**	<1	<1

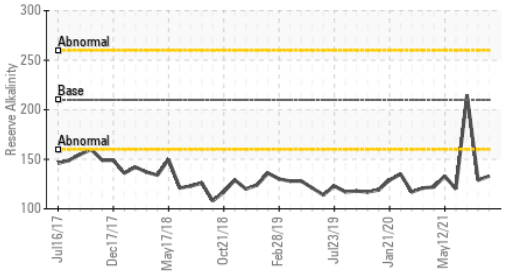
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m)		**2**	2	1
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**<1**	<1	<1
Manganese	ppm	ASTM D5185(m)		**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)		**<1**	<1	<1
Calcium	ppm	ASTM D5185(m)		**<1**	1	<1
Phosphorus	ppm	ASTM D5185(m)		**<1**	1	<1
Zinc	ppm	ASTM D5185(m)		**<1**	14	<1
Sulfur	ppm	ASTM D5185(m)		**11**	17	12
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m)	>15	**<1**	0	<1
Sodium	ppm	ASTM D5185(m)		**9**	197	156
Potassium	ppm	ASTM D5185(m)	>20	**0**	29	7
Water	%	ASTM D6304		**38.04**	39.53	43.97
ppm Water	ppm	ASTM D6304	>10%	**380474.2**	395301.4	439755.9

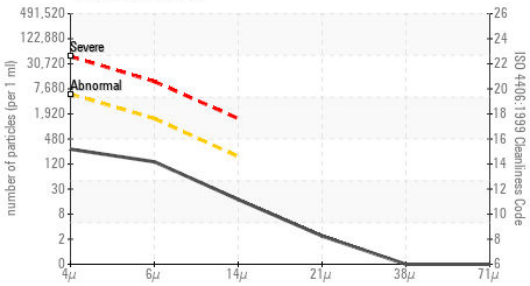
FLUID CLEANLINESS	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647	>5000	**240**	480	480
Particles >6µm	ASTM D7647	>1300	**120**	240	240
Particles >14µm	ASTM D7647	>160	**15**	60	60
Particles >21µm	ASTM D7647	>40	**2**	7	7
Particles >38µm	ASTM D7647	>10	**0**	0	0
Particles >71µm	ASTM D7647	>3	**0**	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	**15/14/11**	16/15/13	16/15/13

OIL ANALYSIS REPORT

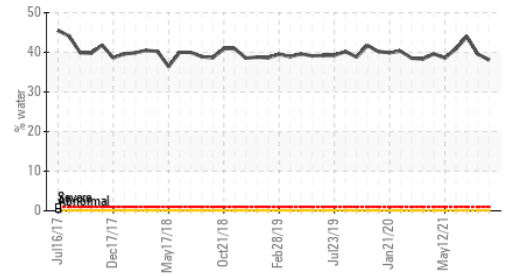
Reserve Alkalinity



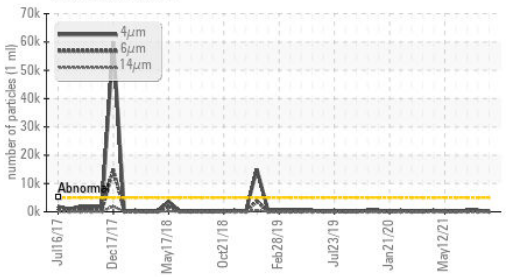
Particle Count



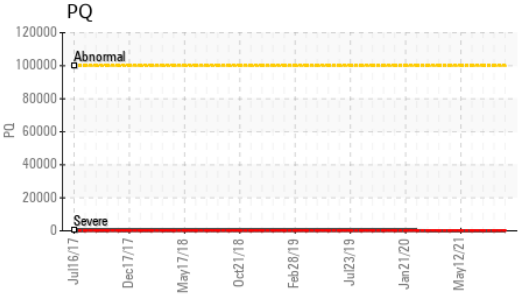
Water



Particle Trend



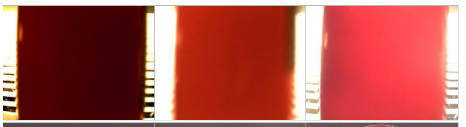
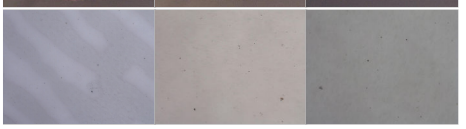
PQ



FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D974		**6.01**	6.13	5.79
Alkiline Reserve (Oils)	ml KOH/g	ASTM D1121	210	▲ **133**	▲ 129	215

VISUAL		method	limit/base	current	history 1	history 2
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	**FRGLY**	FRGLY	NORML
Odor	scalar	Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual		**>10%**	>10%	>10%
Free Water	scalar	Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
pH	Scale 0-14	ASTM D1287		**8.81**	8.94	8.77
Visc @ 40°C	cSt	ASTM D7279(m)	43	**39.6**	40.4	▲ 36.8

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color					
Bottom					
PrtFilter					

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC1234567 **Received** : 11 Apr 2022
Lab Number : 01234567 **Diagnosed** : 12 Apr 2022
Unique Number : 12345678 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: KF, pH, PQ, PrtFilter, PrtFilterPrep, ReserveAlk)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
(m) Denotes a modified test method, (e) Denotes a test conducted using an external laboratory.

Cusany Logistics Inc.
1212 Industrial Place
Centerville, OH
USA 75900
Contact: Jim Leduc
jim.leduc@cusanylogisticsinc.com
T: (305)555-1212
F: (305)555-1222