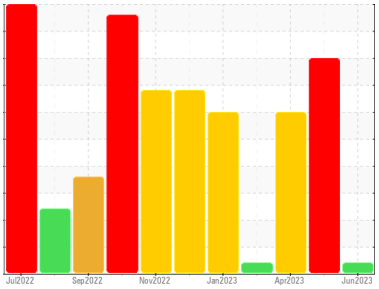
OIL DIAGNOSTICS

PROBLEM SUMMARY

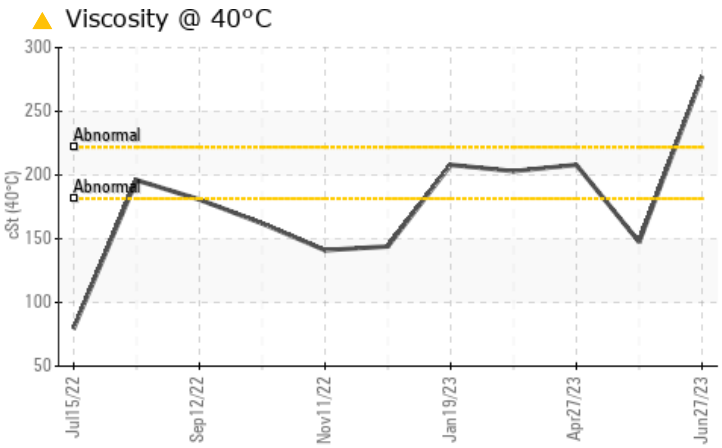
Sample Rating Trend



VISCOSITY

Machine Id
BASIN DRILLING 105
Component
2 Pump
Fluid
BAD ASS 220 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	SEVERE	ABNORMAL
Visc @ 40°C	cSt	ASTM D445		**277.3**	147.4	208

Customer Id: DELSHR
Sample No.: PCA0093214
Lab Number: 05893842
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

31 May 2023 Diag: Jonathan Hester

DIRT

We advise that you check all areas where dirt can enter the system. We recommend an early resample to monitor this condition.The copper level is abnormal. All other component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. An additive depletion is indicated. Viscosity of sample indicates oil is within ISO 150 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

view report

27 Apr 2023 Diag: Jonathan Hester

WATER

We advise that you check for the source of water entry. We advise that you check all areas where dirt can enter the system. We advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition.All component wear rates are normal. Excessive free water present. There is a light concentration of water present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The AN level is acceptable for this fluid.

view report

01 Mar 2023 Diag: Don Baldridge

VIS DEBRIS

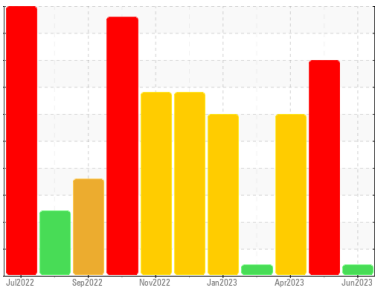
No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Machine Id
BASIN DRILLING 105
Component
2 Pump
Fluid
BAD ASS 220 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The oil viscosity is higher than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0093214**	PCA0096206	PCA0096212
Sample Date		Client Info		**27 Jun 2023**	31 May 2023	27 Apr 2023
Machine Age	mls	Client Info		**0**	0	0
Oil Age	mls	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ATTENTION**	SEVERE	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	**36**	126	103
Chromium	ppm	ASTM D5185m	>7	**<1**	2	2
Nickel	ppm	ASTM D5185m		**0**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	2	1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**14**	▲ 56	▲ 26
Lead	ppm	ASTM D5185m	>35	**0**	2	<1
Copper	ppm	ASTM D5185m	>50	**34**	▲ 102	74
Tin	ppm	ASTM D5185m	>5	**<1**	2	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

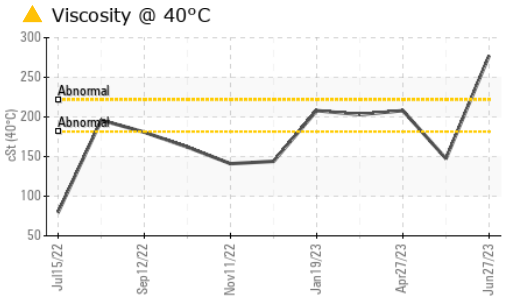
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**1**	21	29
Barium	ppm	ASTM D5185m		**69**	▲ 259	98
Molybdenum	ppm	ASTM D5185m		**0**	3	<1
Manganese	ppm	ASTM D5185m		**<1**	2	1
Magnesium	ppm	ASTM D5185m		**6**	21	6
Calcium	ppm	ASTM D5185m		**32**	▲ 216	85
Phosphorus	ppm	ASTM D5185m		**143**	255	219
Zinc	ppm	ASTM D5185m		**15**	58	20
Sulfur	ppm	ASTM D5185m		**8227**	▲ 7946	6475

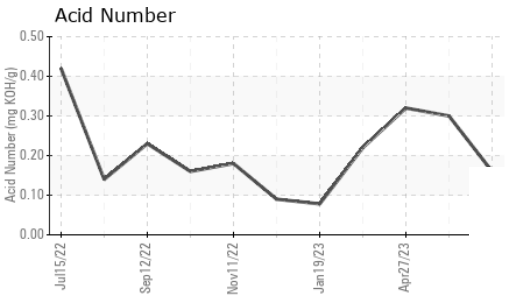
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**38**	⬢ 141	▲ 74
Sodium	ppm	ASTM D5185m		**4**	13	12
Potassium	ppm	ASTM D5185m	>20	**4**	20	10

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.16**	0.30	0.32

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	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**	LIGHT	▲ MODER
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		**NEG**	NEG	▲ 0.2%
Free Water	scalar	*Visual		**NEG**	NEG	▲ >10%

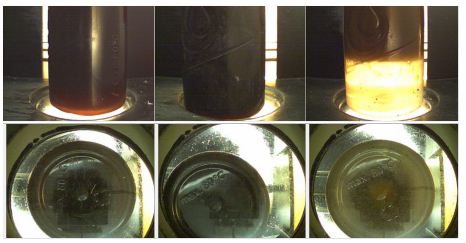
OIL ANALYSIS REPORT



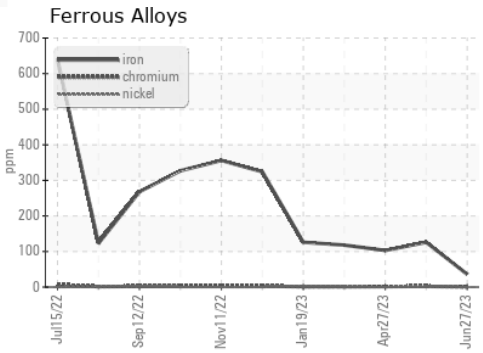


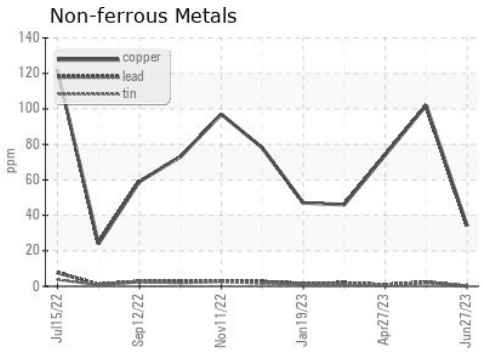
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		▲ **277.3**	▲ 147.4	208

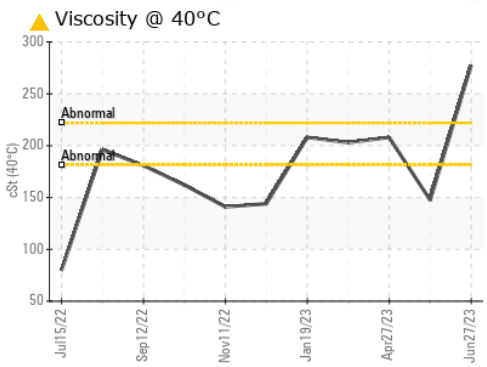
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

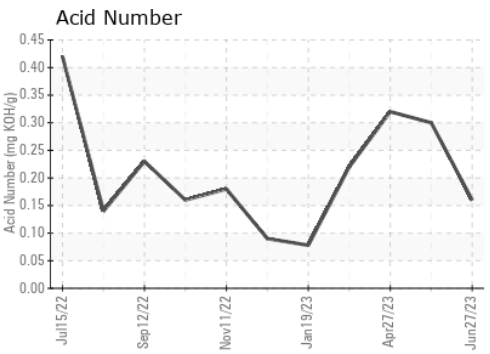


GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0093214 **Received** : 10 Jul 2023
Lab Number : 05893842 **Diagnosed** : 13 Jul 2023
Unique Number : 10549652 **Diagnostician** : Doug Bogart
Test Package : IND 2

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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