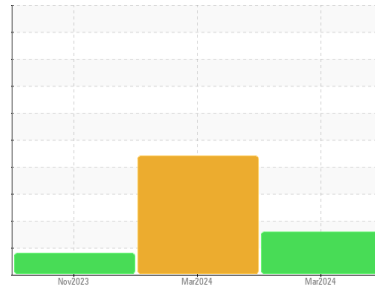




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

URC
Machine Id

ROV Hydraulic Compensator

Component

Hydraulic System

Fluid

SHELL AEROSHELL 41 (--- 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 particulates 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		PH0003506	PH0003503	PH0000923
Sample Date	Client Info		25 Mar 2024	11 Mar 2024	08 Nov 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Not Changed	Not Changed	Not Changed
Sample Status			ATTENTION	SEVERE	ATTENTION

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.05	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>20	0	6	3
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>20	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	0	<1
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>20	0	3	7
Tin	ppm	ASTM D5185m	>20	5	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		0	0	0
Barium	ppm	ASTM D5185m	0	1	<1	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		0	0	0
Calcium	ppm	ASTM D5185m		<1	2	6
Phosphorus	ppm	ASTM D5185m		543	596	479
Zinc	ppm	ASTM D5185m		0	7	13
Sulfur	ppm	ASTM D5185m		90	112	175

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>15	<1	0	<1
Sodium	ppm	ASTM D5185m		<1	2	<1
Potassium	ppm	ASTM D5185m	>20	0	0	0

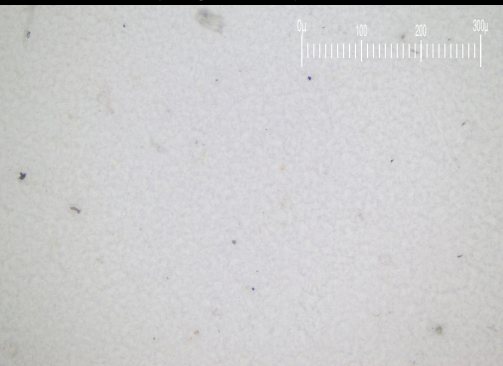
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	8807	▲ 46169	● 19265
Particles >6µm	ASTM D7647	>2500	● 2845	▲ 6489	1864
Particles >14µm	ASTM D7647	>320	● 330	145	108
Particles >21µm	ASTM D7647	>80	● 114	22	29
Particles >38µm	ASTM D7647	>20	7	0	1
Particles >71µm	ASTM D7647	>4	1	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	● 20/19/16	▲ 23/20/14	● 21/18/14

FLUID DEGRADATION

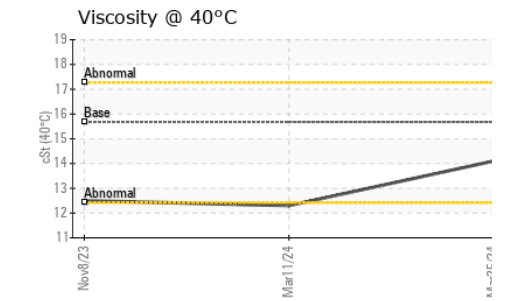
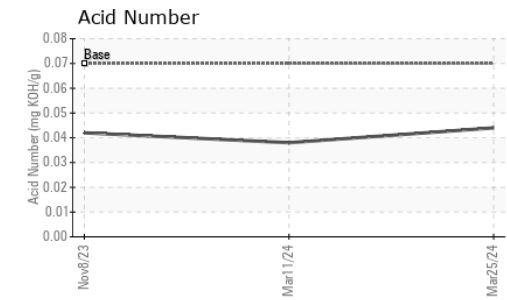
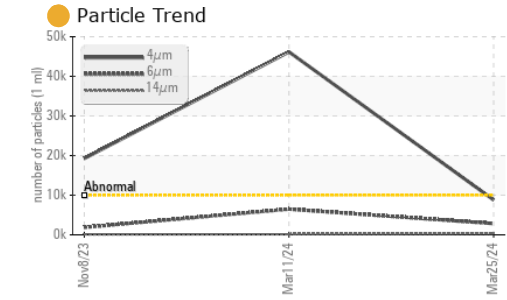
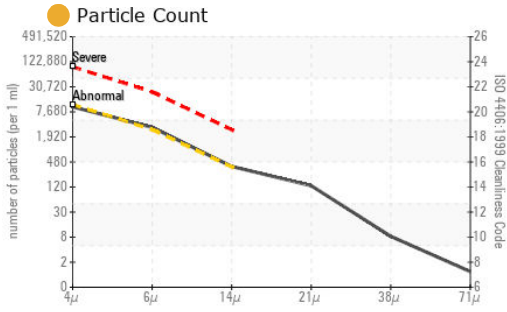
	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.07	0.044	0.038	0.042

Particle Filter (Magn: 200 x)





OIL ANALYSIS REPORT



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PH0003506 **Received** : 01 Apr 2024
Lab Number : **06135352** **Tested** : 05 Apr 2024
Unique Number : 10954817 **Diagnosed** : 08 Apr 2024 - Jonathan Hester
Test Package : PLANT (Additional Tests: PrtFilter)

OCEANEERING INTERNATIONAL INC
 497 BLDG
 SAN DIEGO, CA
 US 92135
 Contact: CALVIN BROWN
 CBROWN4@OCEANEERING.NET
 T: (404)642-8815
 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

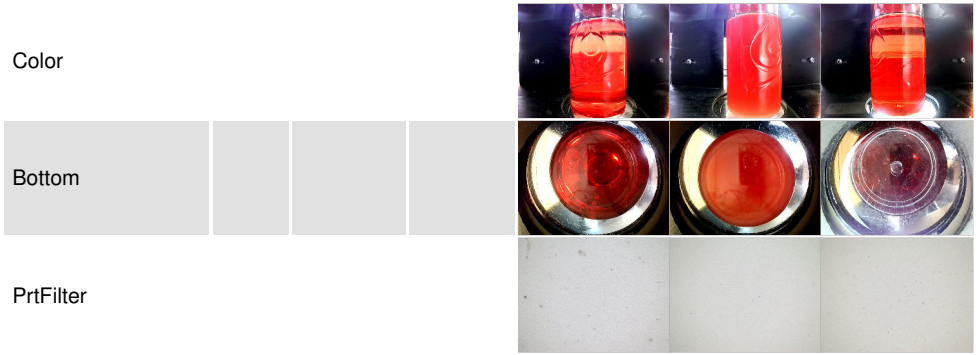
* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG ▲ 0.2%	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	15.68	14.1	12.3	12.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS

