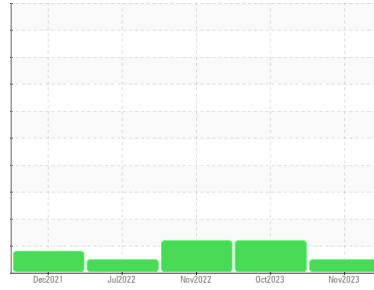


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Vessel
Machine Id
KAT 023 (AFT (MAIN WINCH) HYDRAULIC SERVO)
Component
Hydraulic System
Fluid
SHELL TELLUS 22 (500 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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 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	PC0080316	PC0011771	PC0032246
Sample Date	Client Info	22 Nov 2023	18 Oct 2023	08 Nov 2022
Machine Age	days	Client Info	0	0
Oil Age	days	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	ABNORMAL	ABNORMAL

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 D5185(m) >20	<1	1	1
Chromium	ppm ASTM D5185(m) >10	0	0	0
Nickel	ppm ASTM D5185(m) >10	<1	<1	0
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	<1	<1	0
Aluminum	ppm ASTM D5185(m) >10	<1	0	0
Lead	ppm ASTM D5185(m) >20	<1	<1	<1
Copper	ppm ASTM D5185(m) >20	2	5	4
Tin	ppm ASTM D5185(m) >10	0	0	0
Antimony	ppm ASTM D5185(m)	0	0	0
Vanadium	ppm ASTM D5185(m)	0	0	0
Beryllium	ppm ASTM D5185(m)	0	0	0
Cadmium	ppm ASTM D5185(m)	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m)	<1	<1	<1
Barium	ppm ASTM D5185(m)	<1	<1	0
Molybdenum	ppm ASTM D5185(m)	0	0	0
Manganese	ppm ASTM D5185(m)	0	0	0
Magnesium	ppm ASTM D5185(m) 11	8	9	11
Calcium	ppm ASTM D5185(m) 35	46	34	36
Phosphorus	ppm ASTM D5185(m) 259	261	243	273
Zinc	ppm ASTM D5185(m) 270	321	300	295
Sulfur	ppm ASTM D5185(m) 1849	1462	1310	1364
Lithium	ppm ASTM D5185(m)	<1	<1	<1

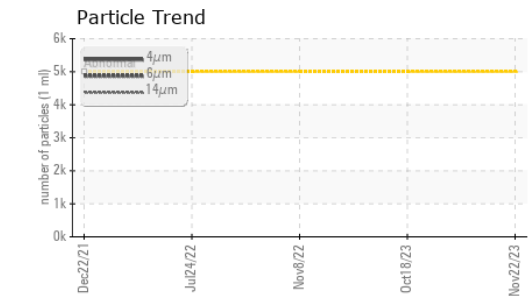
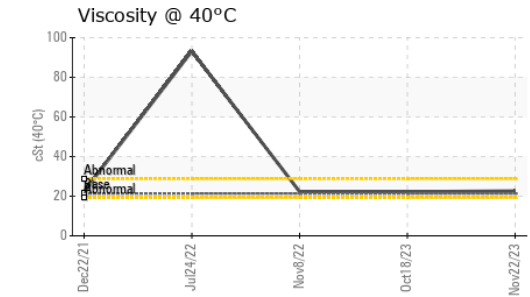
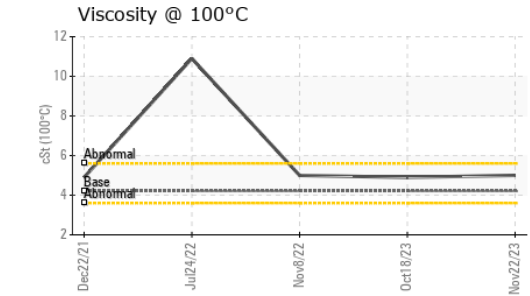
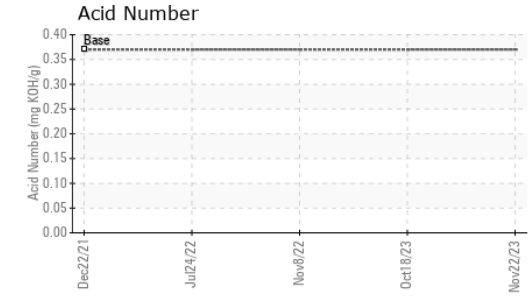
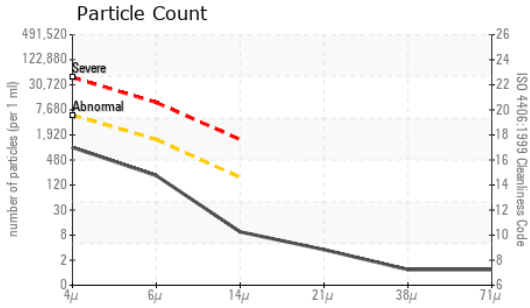
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	10	2	3
Sodium	ppm ASTM D5185(m)	<1	2	1
Potassium	ppm ASTM D5185(m) >20	0	0	<1

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	845	---	---
Particles >6µm	ASTM D7647 >1300	178	---	---
Particles >14µm	ASTM D7647 >160	8	---	---
Particles >21µm	ASTM D7647 >40	3	---	---
Particles >38µm	ASTM D7647 >10	1	---	---
Particles >71µm	ASTM D7647 >3	1	---	---
Oil Cleanliness	ISO 4406 (c) >19/17/14	17/15/10	---	---

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Ocean Choice International - Katsheshuk II**
Sample No. : PC0080316 **Received** : 08 Dec 2023 1315 Topsail Rd, P.O. Box 8190
Lab Number : **02601822** **Diagnosed** : 11 Dec 2023 St. John's, NL
Unique Number : 5694907 **Diagnostician** : Kevin Marson CA A1B 3N4
Test Package : IND 2 (Additional Tests: KV100, VI) **Contact:** Chief Engineer

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

katengine@oceanchoice.com
 T:
 F:

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN) mg KOH/g	ASTM D974*	0.37	0.27	---	---

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*	>0.05	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES

method	limit/base	current	history1	history2		
Visc @ 40°C	cSt	ASTM D7279(m)	21.33	22.6	▲ 22.2	▲ 22.3
Visc @ 100°C	cSt	ASTM D7279(m)	4.21	5	▲ 4.9	▲ 5
Viscosity Index (VI)	Scale	ASTM D2270*	99	155	▲ 151	▲ 158

SAMPLE IMAGES

