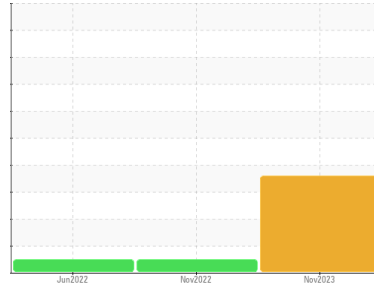


PROBLEM SUMMARY

Sample Rating Trend



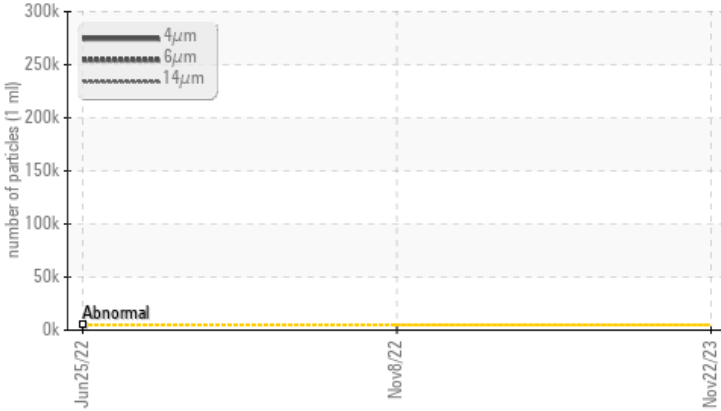
ISO



Area
Vessel
Machine Id
KAT 06 (EMERGENCY FIRE PUMP)
Component
Bow Thruster
Fluid
NOT GIVEN (42 LTR)

COMPONENT CONDITION SUMMARY

Particle Trend



RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	NORMAL	NORMAL
Particles >4µm	ASTM D7647	>5000	🔴 257904	---	---
Particles >6µm	ASTM D7647	>1300	🔴 34409	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	🔴 25/22/14	---	---

Customer Id: KATSHESH
Sample No.: PC0080265
Lab Number: 02601878
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

HISTORICAL DIAGNOSIS

08 Nov 2022 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid. All component wear rates are normal. There is no indication of any contamination in the component (unconfirmed). Viscosity of sample indicates oil is within SAE 15W40 range, advise investigate. The condition of the oil is acceptable for the time in service.

view report



25 Jun 2022 Diag: Kevin Marson

NORMAL

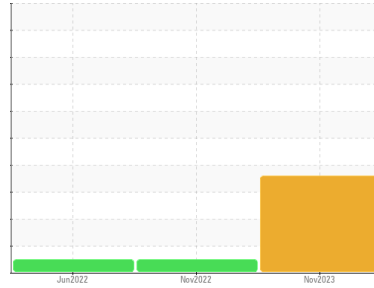


Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. Please provide more complete information on your next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid. All component wear rates are normal. There is no indication of any contamination in the component (unconfirmed). Viscosity of sample indicates oil is within SAE 15W40 range, advise investigate. The condition of the oil is acceptable for the time in service.

view report



Area
Vessel
Machine Id
KAT 06 (EMERGENCY FIRE PUMP)
Component
Bow Thruster
Fluid
NOT GIVEN (42 LTR)



DIAGNOSIS

Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PC0080265	PC0032255	PC0018571
Sample Date	Client Info			22 Nov 2023	08 Nov 2022	25 Jun 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				SEVERE	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.2	NEG	NEG	NEG

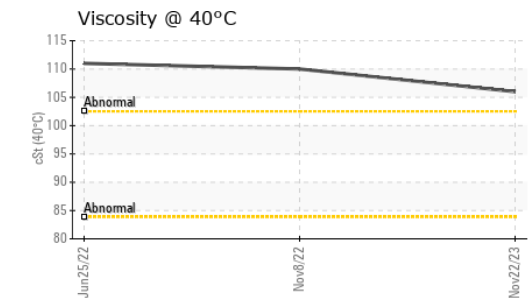
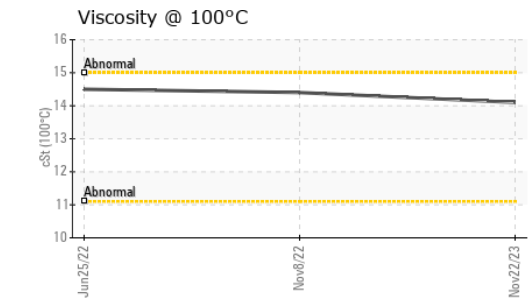
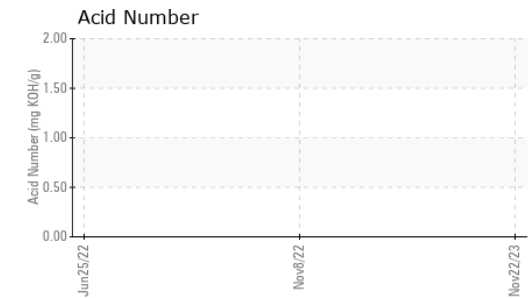
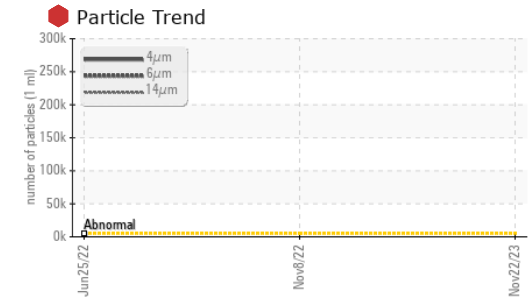
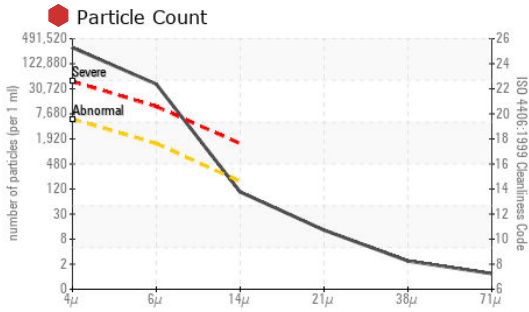
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>90	5	4	4
Chromium	ppm	ASTM D5185(m)	>10	0	0	<1
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)		<1	0	0
Aluminum	ppm	ASTM D5185(m)	>10	2	1	1
Lead	ppm	ASTM D5185(m)	>20	2	1	<1
Copper	ppm	ASTM D5185(m)	>20	4	2	1
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<1
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)		30	33	33
Barium	ppm	ASTM D5185(m)		<1	0	0
Molybdenum	ppm	ASTM D5185(m)		0	<1	<1
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		23	23	24
Calcium	ppm	ASTM D5185(m)		2403	2530	2550
Phosphorus	ppm	ASTM D5185(m)		871	995	923
Zinc	ppm	ASTM D5185(m)		1026	1047	1073
Sulfur	ppm	ASTM D5185(m)		3306	3740	3457
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>7	6	7	7
Sodium	ppm	ASTM D5185(m)		4	4	4
Potassium	ppm	ASTM D5185(m)	>20	5	4	4

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	257904	---	---	
Particles >6µm	ASTM D7647	>1300	34409	---	---	
Particles >14µm	ASTM D7647	>160	90	---	---	
Particles >21µm	ASTM D7647	>40	11	---	---	
Particles >38µm	ASTM D7647	>10	2	---	---	
Particles >71µm	ASTM D7647	>3	1	---	---	
Oil Cleanliness	ISO 4406 (c)	>19/17/14	25/22/14	---	---	

OIL ANALYSIS REPORT



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Ocean Choice International - Katsheshuk II
Sample No. : PC0080265 **Received** : 08 Dec 2023 1315 Topsail Rd, P.O. Box 8190
Lab Number : 02601878 **Diagnosed** : 11 Dec 2023 St. John's, NL
Unique Number : 5694963 **Diagnostician** : Kevin Marson CA A1B 3N4
Test Package : IND 2 (Additional Tests: KV100, TAN Man, VI)
 Contact: Chief Engineer
 katengine@oceanchoice.com

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.

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D974*		1.86	---	---

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*	>0.2	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)		106	110	111
Visc @ 100°C cSt ASTM D7279(m)		14.1	14.4	14.5
Viscosity Index (VI) Scale ASTM D2270*		134	133	133

SAMPLE IMAGES

