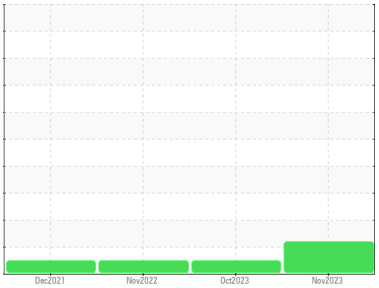
PROBLEM SUMMARY

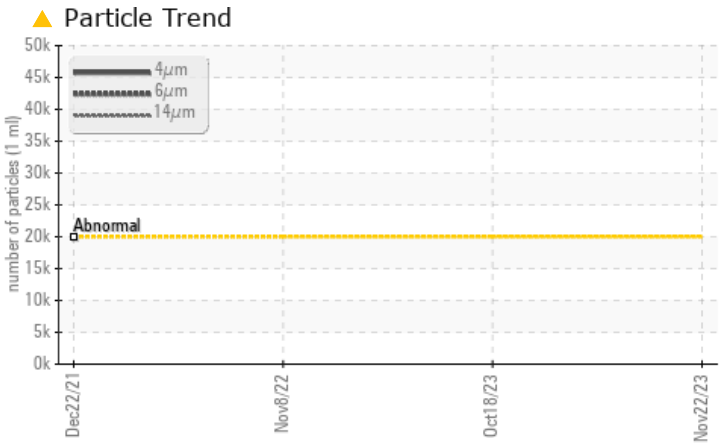
Sample Rating Trend



ISO

Area
Vessel
Machine Id
KAT 019 (LOW PRESSURE HYDRAULICS)
Component
Winch
Fluid
NOT GIVEN (1000 LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	NORMAL
Particles >4µm		ASTM D7647	>20000	▲ **48025**	---	---
Particles >6µm		ASTM D7647	>5000	▲ **8748**	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **23/20/15**	---	---

Customer Id: KATSHESH
Sample No.: PC0080308
Lab Number: 02601986
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	---	---	?	We recommend an early resample to monitor this condition.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample.

HISTORICAL DIAGNOSIS

18 Oct 2023 Diag: Kevin Marson

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report

08 Nov 2022 Diag: Kevin Marson

NORMAL

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report

22 Dec 2021 Diag: Kevin Marson

NORMAL

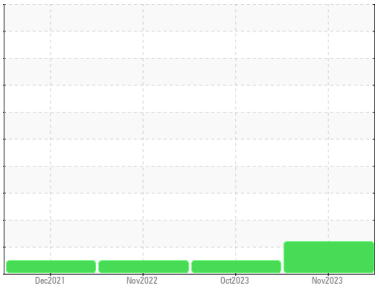
Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is ISO 100 AW Hydraulic Oil (Hi-Visc). Please confirm the oil type and grade, and specify the brand of the oil on your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report

LUBE 360 DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
Vessel
Machine Id
KAT 019 (LOW PRESSURE HYDRAULICS)
Component
Winch
Fluid
NOT GIVEN (1000 LTR)

DIAGNOSIS

▲ Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. 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 moderate 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		**PC0080308**	PC0018592	PC0032251
Sample Date		Client Info		**22 Nov 2023**	18 Oct 2023	08 Nov 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				**ABNORMAL**	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)	>30	**7**	8	9
Chromium	ppm	ASTM D5185(m)	>2	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>2	**<1**	0	0
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	0
Silver	ppm	ASTM D5185(m)	>2	**<1**	<1	0
Aluminum	ppm	ASTM D5185(m)	>5	**0**	0	0
Lead	ppm	ASTM D5185(m)	>70	**<1**	0	<1
Copper	ppm	ASTM D5185(m)	>65	**2**	2	2
Tin	ppm	ASTM D5185(m)	>9	**0**	0	0
Antimony	ppm	ASTM D5185(m)	>5	**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

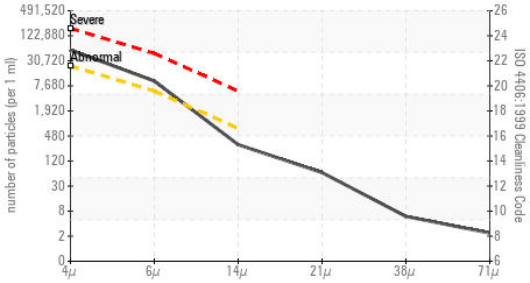
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**<1**	1	1
Barium	ppm	ASTM D5185(m)		**<1**	<1	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	<1
Manganese	ppm	ASTM D5185(m)		**0**	0	<1
Magnesium	ppm	ASTM D5185(m)		**9**	6	4
Calcium	ppm	ASTM D5185(m)		**69**	63	76
Phosphorus	ppm	ASTM D5185(m)		**272**	273	302
Zinc	ppm	ASTM D5185(m)		**312**	306	313
Sulfur	ppm	ASTM D5185(m)		**1226**	1134	1172
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	**6**	3	3
Sodium	ppm	ASTM D5185(m)		**1**	2	2
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	1

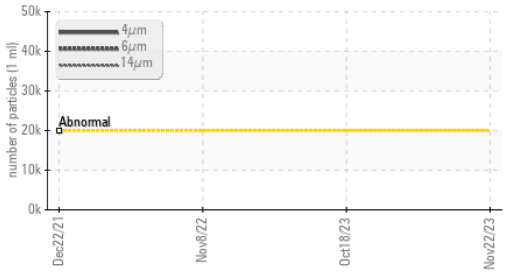
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **48025**	---	---
Particles >6µm		ASTM D7647	>5000	▲ **8748**	---	---
Particles >14µm		ASTM D7647	>640	**261**	---	---
Particles >21µm		ASTM D7647	>160	**56**	---	---
Particles >38µm		ASTM D7647	>40	**5**	---	---
Particles >71µm		ASTM D7647	>10	**2**	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **23/20/15**	---	---

OIL ANALYSIS REPORT

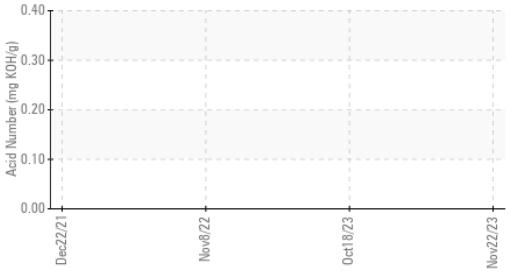
Particle Count



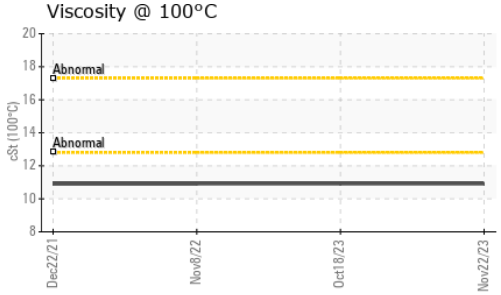
Particle Trend



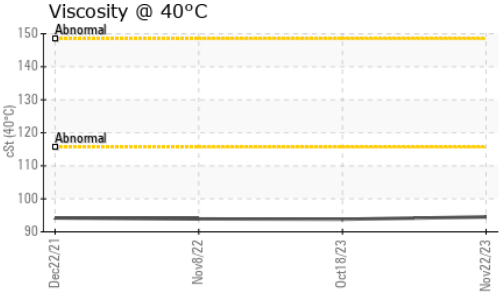
Acid Number



Viscosity @ 100°C



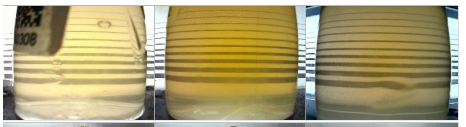
Viscosity @ 40°C



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.33**	---	---

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)		**94.5**	93.8	93.9
Visc @ 100°C	cSt	ASTM D7279(m)		**10.9**	10.9	10.9
Viscosity Index (VI)	Scale	ASTM D2270*		**99**	100	100

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0080308
Lab Number : 02601986
Unique Number : 5695071
Test Package : IND 2 (Additional Tests: KV100, VI)

Received : 08 Dec 2023
Diagnosed : 11 Dec 2023
Diagnostician : Kevin Marson

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.

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Contact: Chief Engineer
katengine@oceanchoice.com
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F:

Report Id: KATSHESH [WCAMIS] 02601986 (Generated: 12/11/2023 10:34:42) Rev: 1

Submitted By: Stephen Elliott