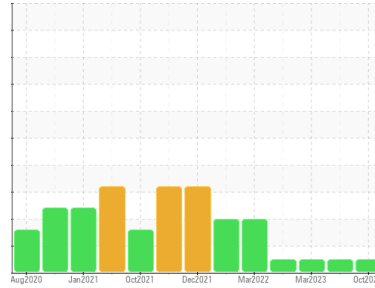




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
GUAY SON [CONHER]
 Machine Id
MADE IN MEXICO IBACO BM NAUTICO 4
 Component
Auxiliary Auxiliary Engine
 Fluid
XTRA REV 15W40 (8 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KL0013340	KL0012836	KL0011368
Sample Date	Client Info		25 Oct 2023	20 Sep 2023	15 Mar 2023
Machine Age	hrs	Client Info	3835	2891	2778
Oil Age	hrs	Client Info	214	24	156
Oil Changed	Client Info		Changed	Changed	Not Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	10	13	4
Chromium	ppm	ASTM D5185m >20	0	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m >2	0	<1	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	<1	4	1
Lead	ppm	ASTM D5185m >40	0	0	<1
Copper	ppm	ASTM D5185m >330	<1	2	<1
Tin	ppm	ASTM D5185m >15	0	<1	<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	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	<1	<1
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m	20	18	15
Calcium	ppm	ASTM D5185m	3689	3889	3734
Phosphorus	ppm	ASTM D5185m	939	980	909
Zinc	ppm	ASTM D5185m	1138	1225	1087
Sulfur	ppm	ASTM D5185m	4309	5070	5694

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	3	5	4
Sodium	ppm	ASTM D5185m	1	2	1
Potassium	ppm	ASTM D5185m >20	0	0	<1

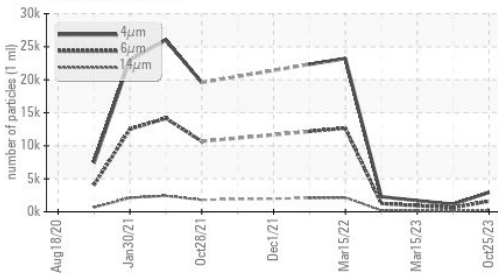
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.9	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	12.3	7.8	6.0
Sulfation	Abs./1mm	*ASTM D7415 >30	21.6	18.5	17.1

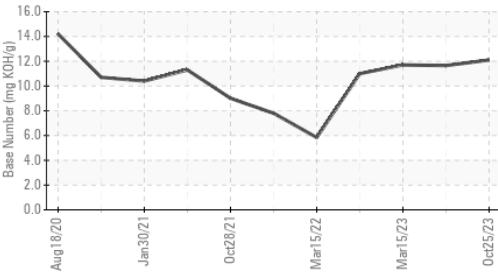


OIL ANALYSIS REPORT

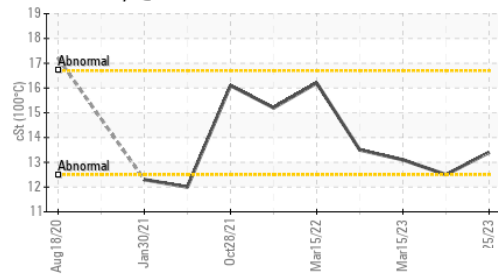
Particle Trend



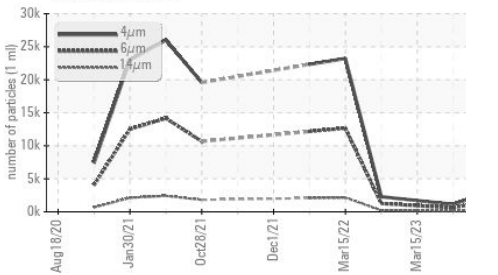
Base Number



Viscosity @ 100°C



Particle Trend



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		2940	1140	1705
Particles >6µm	ASTM D7647	>5000	1602	621	929
Particles >14µm	ASTM D7647	>640	273	106	158
Particles >21µm	ASTM D7647	>160	92	36	53
Particles >38µm	ASTM D7647	>40	14	5	8
Particles >71µm	ASTM D7647	>10	1	1	1
Oil Cleanliness	ISO 4406 (c)	>19/16	18/15	16/14	17/14

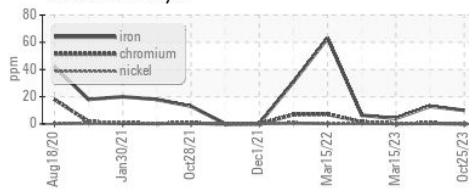
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414	>25	17.5	13.4	10.7
Base Number (BN)	mg KOH/g ASTM D2896		12.10	11.65	11.70

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar *Visual	NONE	NONE	NONE	VLITE
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	>0.1	NEG	NEG	NEG
Free Water	scalar *Visual		NEG	NEG	NEG

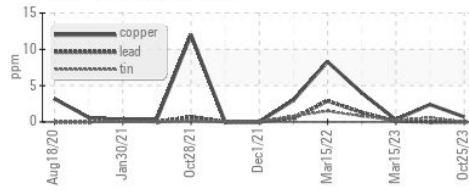
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D445		13.4	12.5	13.1

GRAPHS

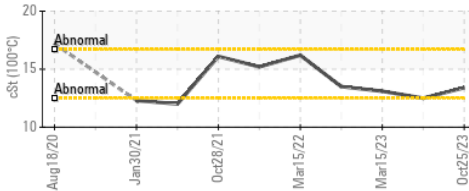
Ferrous Alloys



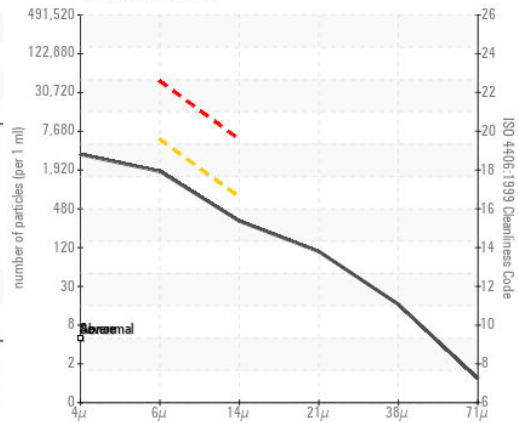
Non-ferrous Metals



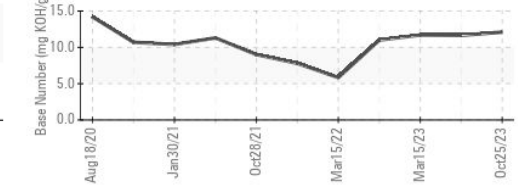
Viscosity @ 100°C



Particle Count



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : KL0013340 Received : 01 Nov 2023
 Lab Number : 05996377 Diagnosed : 03 Nov 2023
 Unique Number : 10724737 Diagnostician : Don Baldrige
 Test Package : MOB 2 (Additional Tests: PrtCount)

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)

CONOR
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 HERMOSILLO,
 MX 83140

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