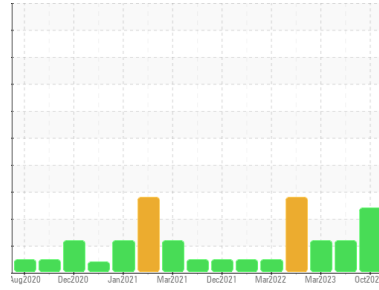




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area
GUAY SON [CONHER]
 Machine Id
MADE IN MEXICO IBACO BM NAUTICO 4
 Component
Bottom Diesel Engine
 Fluid
XTRA REV 15W40 (160 LTR)

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. Fuel content negligible.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	KL0013339	KL0012835	KL0011367
Sample Date	Client Info	25 Oct 2023	20 Sep 2023	15 Mar 2023
Machine Age	hrs	17040	16363	12614
Oil Age	hrs	271	10	645
Oil Changed	Client Info	Not Chngd	Not Chngd	Not Chngd
Sample Status		ATTENTION	ATTENTION	ATTENTION

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >100	4	11	10
Chromium	ppm	ASTM D5185m >20	0	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m >2	0	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	<1	3	2
Lead	ppm	ASTM D5185m >40	0	0	<1
Copper	ppm	ASTM D5185m >330	1	3	3
Tin	ppm	ASTM D5185m >15	0	<1	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	40	36
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	2	28	27
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m	14	114	105
Calcium	ppm	ASTM D5185m	2566	2502	2545
Phosphorus	ppm	ASTM D5185m	1091	1118	1053
Zinc	ppm	ASTM D5185m	1272	1345	1242
Sulfur	ppm	ASTM D5185m	3237	3700	3926

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	7	5	5
Sodium	ppm	ASTM D5185m	0	<1	<1
Potassium	ppm	ASTM D5185m >20	<1	0	<1
Fuel	%	ASTM D3524 >5	1.4	▲ 4.8	▲ 3.8

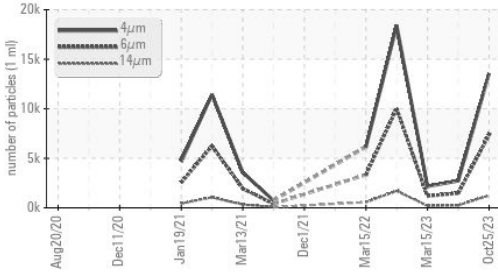
INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	0.9	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	8.9	7.5	7.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.6	17.9	18.1

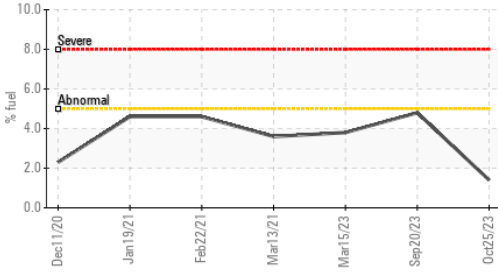


OIL ANALYSIS REPORT

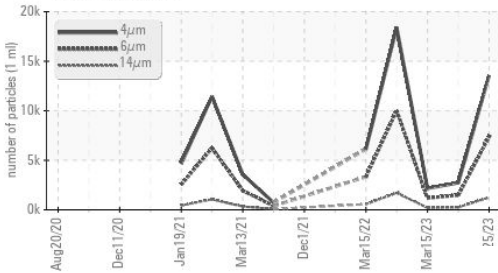
Particle Trend



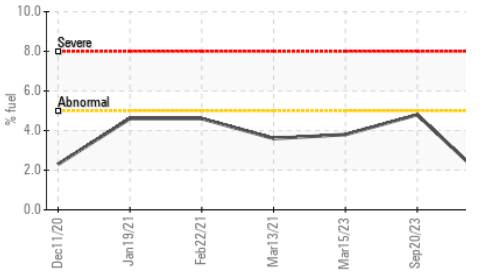
Fuel Dilution



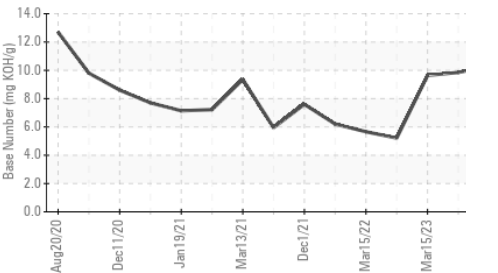
Particle Trend



Fuel Dilution



Base Number



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		13554	2723	2166
Particles >6µm	ASTM D7647	>5000	▲ 7384	1483	1180
Particles >14µm	ASTM D7647	>640	▲ 1257	252	201
Particles >21µm	ASTM D7647	>160	▲ 423	85	68
Particles >38µm	ASTM D7647	>40	▲ 65	13	10
Particles >71µm	ASTM D7647	>10	7	1	1
Oil Cleanliness	ISO 4406 (c)	>19/16	▲ 20/17	18/15	17/15

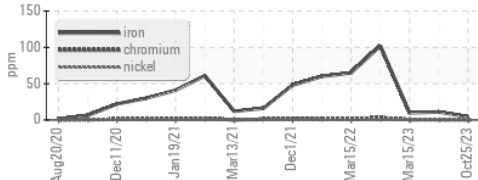
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm *ASTM D7414	>25	15.1	10.5	10.6
Base Number (BN)	mg KOH/g ASTM D2896		10.30	9.85	9.64

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

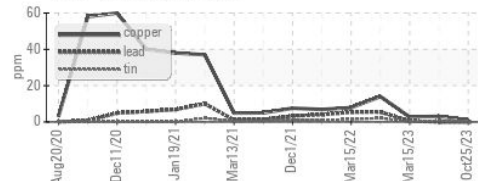
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D445		▲ 11.2	▲ 11.4	▲ 11.8

GRAPHS

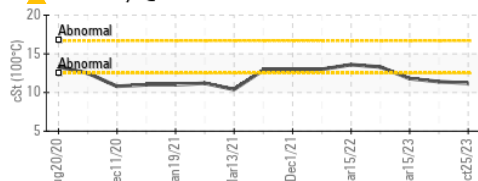
Ferrous Alloys



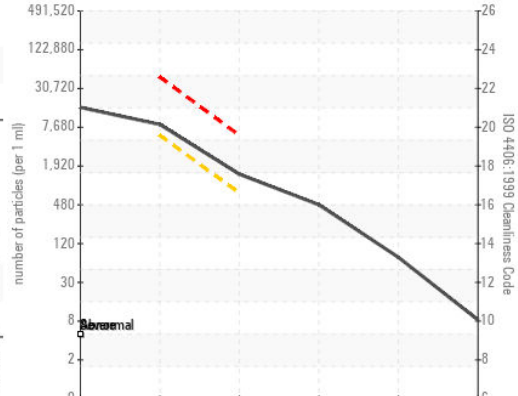
Non-ferrous Metals



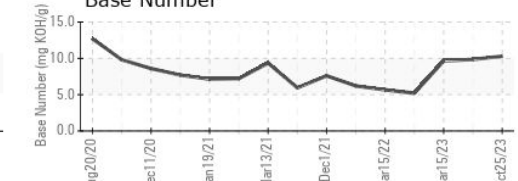
Viscosity @ 100°C



Particle Count



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013339 **Received** : 01 Nov 2023
Lab Number : **05996378** **Diagnosed** : 06 Nov 2023
Unique Number : 10724738 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel, 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
 JUAREZ 348
 HERMOSILLO,
 MX 83140

Contact: EDUARDO GARCIA
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