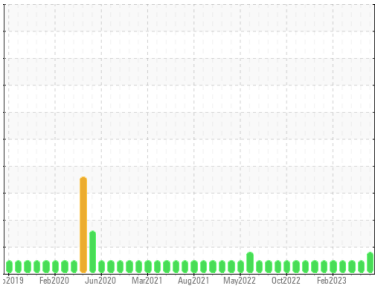
PROBLEM SUMMARY

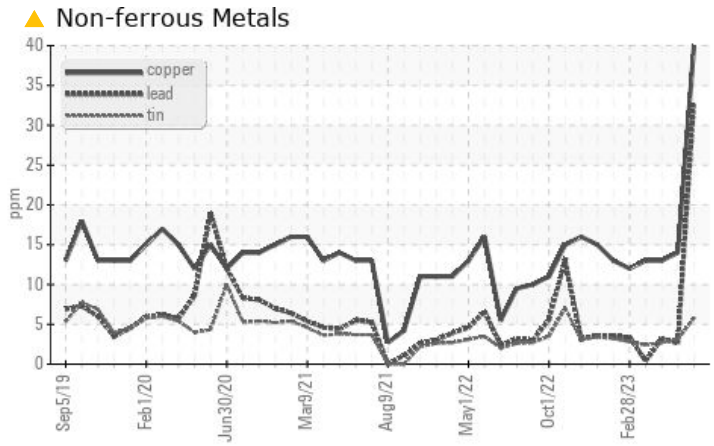
Area
SALLY BROMFIELD
Machine Id
[SALLY BROMFIELD] 003 501709-3
Component
Starboard Main Engine
Fluid
CHEVRON DELO 710 LE (320 GAL)

Sample Rating Trend



WEAR

COMPONENT CONDITION SUMMARY



RECOMMENDATION

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	NORMAL
Lead	ppm	ASTM D5185m	>18	▲ **33**	3	3

Customer Id: INGPAD
Sample No.: MW0052597
Lab Number: 05982038
Test Package: MAR 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

01 Jun 2023 Diag: Wes Davis

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

view report

01 May 2023 Diag: Wes Davis

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

view report

01 Apr 2023 Diag: Wes Davis

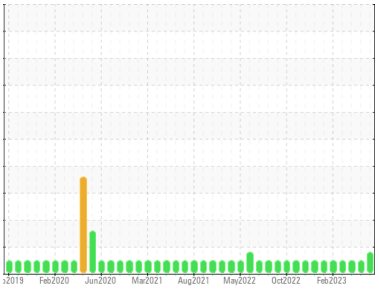
NORMAL

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

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
SALLY BROMFIELD
Machine Id
[SALLY BROMFIELD] 003 501709-3
Component
Starboard Main Engine
Fluid
CHEVRON DELO 710 LE (320 GAL)

DIAGNOSIS

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**MW0052597**	MW0052447	MW0052584
Sample Date		Client Info		**01 Oct 2023**	01 Jun 2023	01 May 2023
Machine Age	hrs	Client Info		**29455**	29324	28995
Oil Age	hrs	Client Info		**7730**	7599	7270
Oil Changed		Client Info		**Not Changd**	N/A	Not Changd
Sample Status				**ABNORMAL**	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	>75	**16**	14	12
Chromium	ppm	ASTM D5185m	>8	**1**	1	1
Nickel	ppm	ASTM D5185m	>2	**<1**	0	<1
Titanium	ppm	ASTM D5185m	>3	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>15	**2**	1	<1
Lead	ppm	ASTM D5185m	>18	▲ **33**	3	3
Copper	ppm	ASTM D5185m	>80	**40**	14	13
Tin	ppm	ASTM D5185m	>14	**6**	3	3
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**52**	48	40
Barium	ppm	ASTM D5185m		**3**	0	0
Molybdenum	ppm	ASTM D5185m		**47**	49	48
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**19**	17	13
Calcium	ppm	ASTM D5185m		**3547**	3943	3675
Phosphorus	ppm	ASTM D5185m		**12**	12	5
Zinc	ppm	ASTM D5185m	10	**22**	<1	6
Sulfur	ppm	ASTM D5185m		**2657**	3017	2496

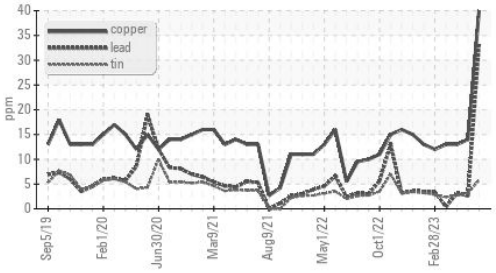
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**4**	4	3
Sodium	ppm	ASTM D5185m	>75	**7**	1	0
Potassium	ppm	ASTM D5185m	>20	**5**	1	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.4**	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**19.4**	9.5	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**6.0**	17.5	15.6

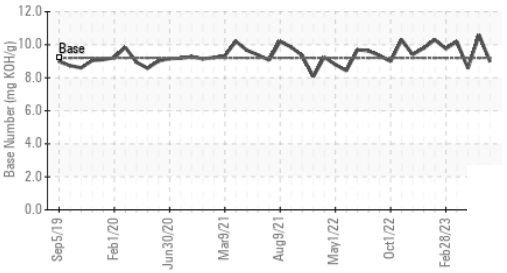
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.6**	10.0	9.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	**8.97**	10.59	8.57

OIL ANALYSIS REPORT

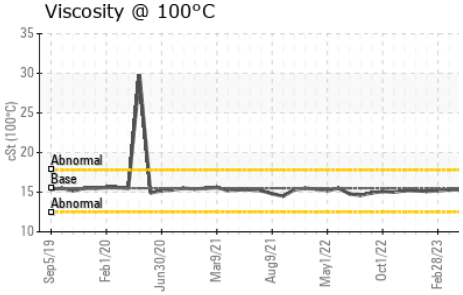
Non-ferrous Metals



Base Number



Viscosity @ 100°C

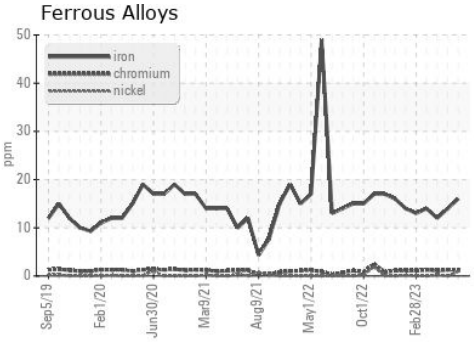


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

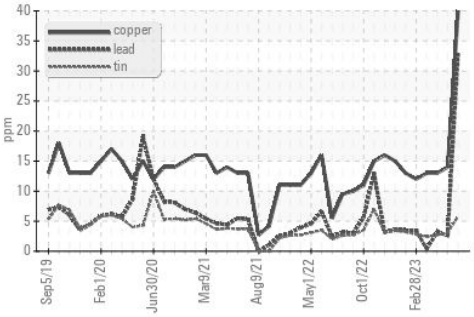
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.5	**13.7**	15.2	15.3

GRAPHS

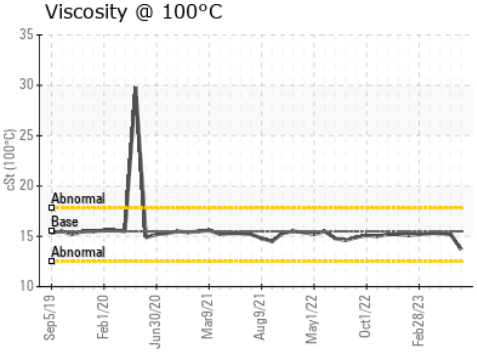
Ferrous Alloys



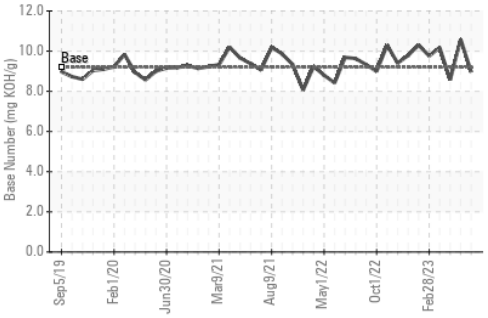
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0052597
Lab Number : 05982038
Unique Number : 10699333
Test Package : MAR 2

Received : 17 Oct 2023
Diagnosed : 19 Oct 2023
Diagnostician : Jonathan Hester

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)

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