MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
BRIAN A NAPACK
Machine Id
[BRIAN A NAPACK] 001 640349-1
Component
Port Main Engine
Fluid
CHEVRON DELO 710 LE (335 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

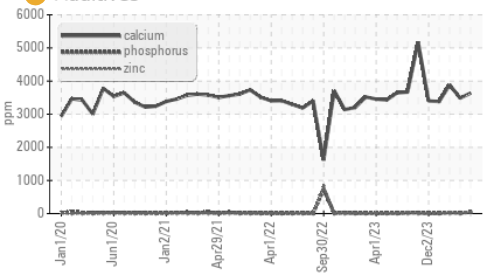
There is no indication of any contamination in the oil.

FLUID CONDITION

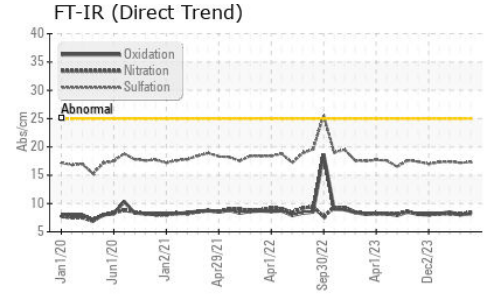
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0068269	MW0068339	MW0068336
Sample Date		Client Info		01 May 2024	30 Mar 2024	01 Mar 2024
Machine Age	hrs	Client Info		77083	76295	75613
Oil Age	hrs	Client Info		77083	76295	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	17	14	13
Chromium	ppm	ASTM D5185m	>8	2	2	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>3	<1	<1	0
Silver	ppm	ASTM D5185m	>2	▲ 1	0	0
Aluminum	ppm	ASTM D5185m	>15	3	2	1
Lead	ppm	ASTM D5185m	>18	5	6	4
Copper	ppm	ASTM D5185m	>80	26	25	21
Tin	ppm	ASTM D5185m	>14	4	5	3
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	6	5	4
Potassium	ppm	ASTM D5185m	>20	4	2	0
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.3	1.2	1.1
Nitration	Abs/cm	*ASTM D7624	>20	8.4	8.1	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.3	17.2	17.4
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
Sodium	ppm	ASTM D5185m	>75	5	6	4
Boron	ppm	ASTM D5185m		● 47	46	50
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		49	49	51
Manganese	ppm	ASTM D5185m		2	2	1
Magnesium	ppm	ASTM D5185m		35	14	40
Calcium	ppm	ASTM D5185m		3636	3486	3884
Phosphorus	ppm	ASTM D5185m		41	15	23
Zinc	ppm	ASTM D5185m	10	● 30	8	28
Sulfur	ppm	ASTM D5185m		2748	2364	3002
Oxidation	Abs/.1mm	*ASTM D7414	>25	8.2	8.0	8.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	9.30	9.05	9.91
Visc @ 100°C	cSt	ASTM D445	15.5	14.8	14.8	14.9

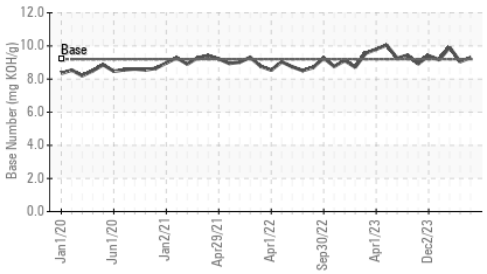
Additives



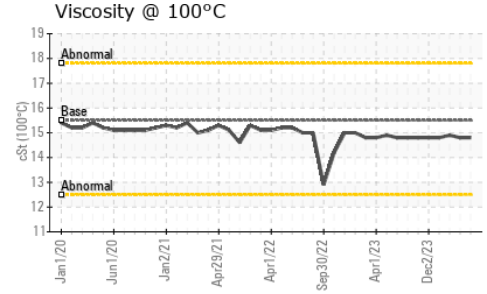
FT-IR (Direct Trend)



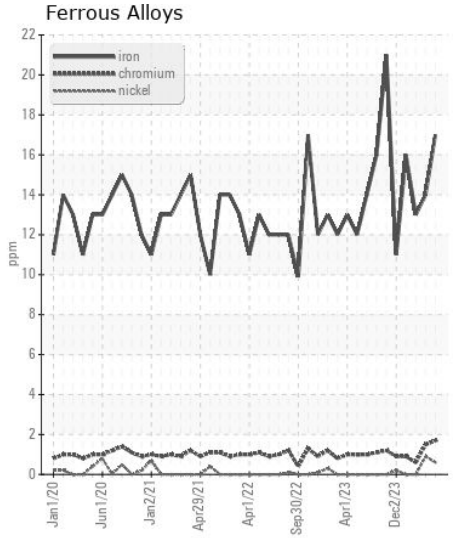
Base Number



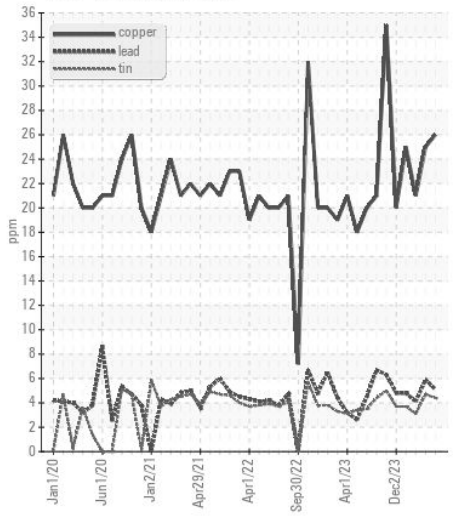
Viscosity @ 100°C



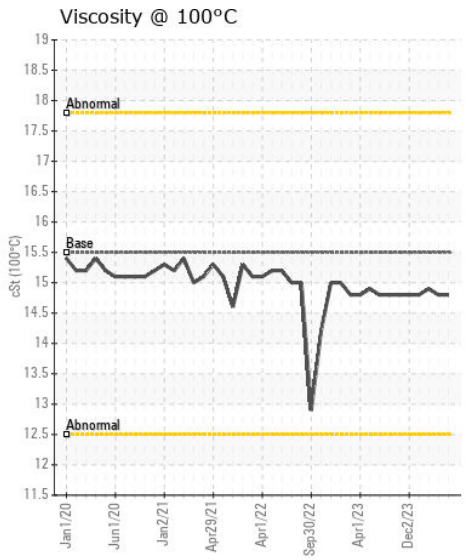
Ferrous Alloys



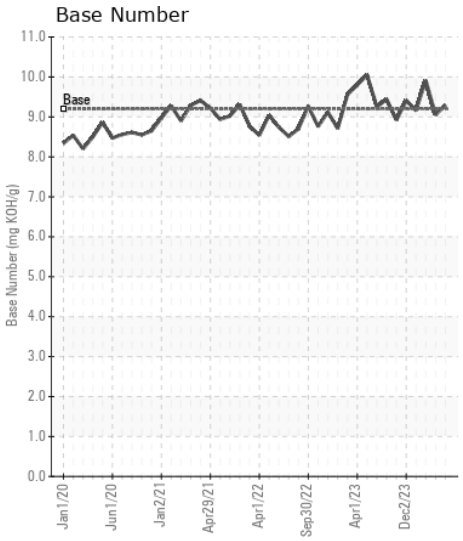
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0068269
Lab Number : 06191225
Unique Number : 11047977
Test Package : MAR 2

Received : 24 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Don Baldridge

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)

INGRAM BARGE
900 S 3RD ST
PADUCAH, KY
US 42003
Contact: JUSTIN WHEELER
justin.wheeler@ingrambarge.com
T:
F: (615)695-3697